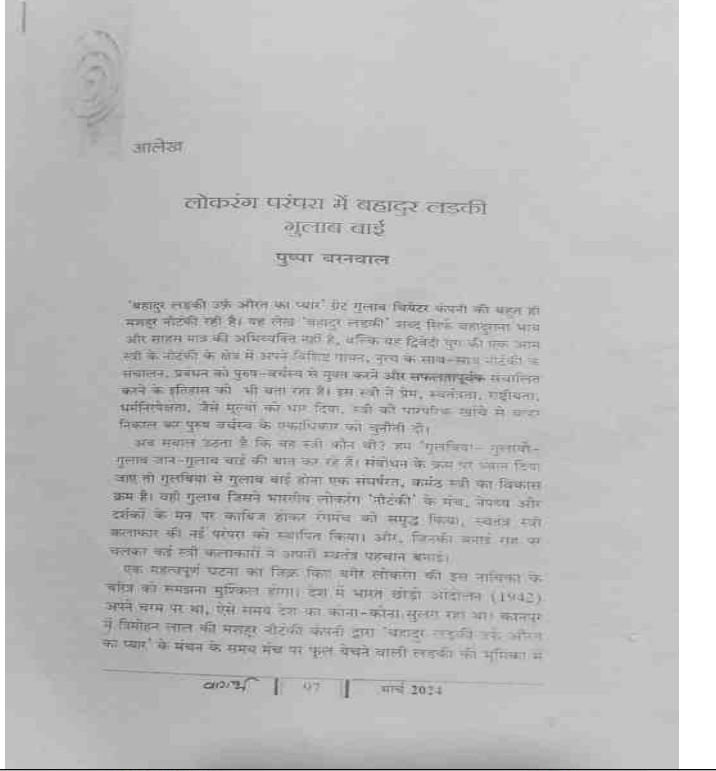



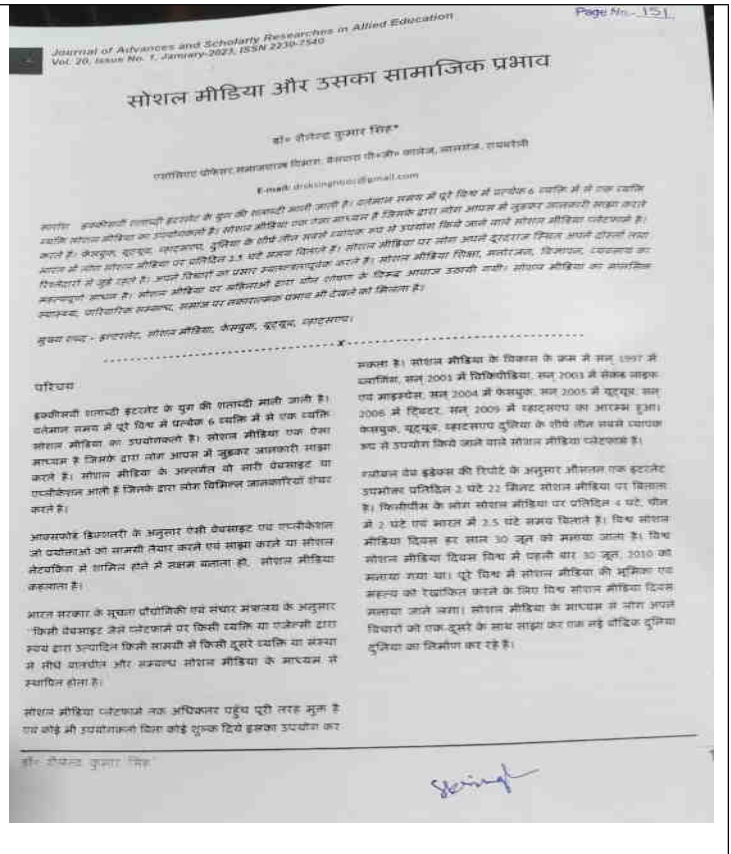
BAISWARA DEGREE COLLEGE, LALGANJ, RAEBARELI

Research Papers Published by Faculty Members

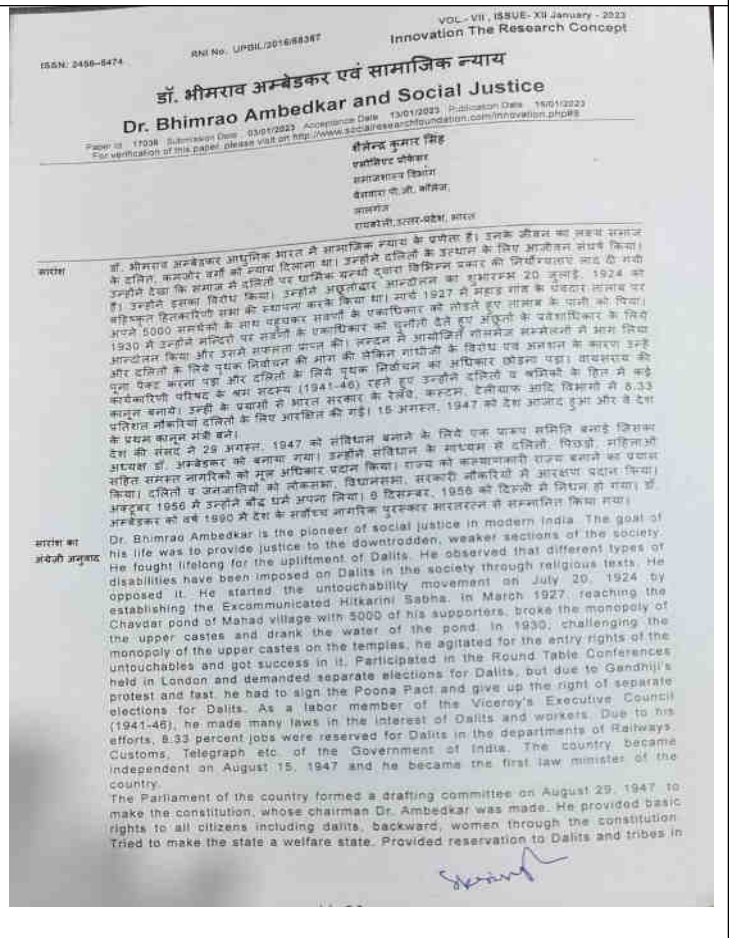
1.	Name of the Author	Dr. Puspa Baranwal	
Title of the Paper/Vol./No./ Page	Lokrang Parampara mei Bahadur Stree-Gulab Bai, 30, 340, 97-103		
Department of the Teacher	Hindi		
Name of the Journal	Vagarth		
Year of Publication	2024		
ISSN	2394-1723		
Link of the recognition in UGC enlistment of the Journal			
2.	Name of the Author	Surya Prakash Verma	
Title of the Paper/Vol./No./ Page	Agrarian Distress, Altruistic Suicide, and Agriculturists in India: A Sociological Study of Sherdil: The Pilibhit Saga (2022)		
Department of the Teacher	English		
Name of the Journal	New Literaria		
Year of Publication	2024		
ISSN	25827375		
Link of the recognition in UGC enlistment of the Journal			

3.	Name of the Author	Priya Dubey	<p style="text-align: right;">© 2024 IJNRD Volume 9, Issue 1, January 2024 ISSN: 2456-4184 IJNRD.ORG</p>  <p style="text-align: center;">Tangles of 'Framed' Identity in <i>Dance Like a Man</i>: Extirpating Gender Stereotypes</p> <p style="text-align: center;">Priya Dubey¹, Dr. Raju Parghi² D.Phil. Research Scholar¹, Assistant Professor² Department of English & Modern European Languages, University of Allahabad, Prayagraj - 211002</p> <p>Abstract:</p> <p>The primary focus of the paper revolves around the concept of gender stereotypes and the issue of identity. Essentially, a framed identity suggests that an individual's true self is confined by preconceived notions and expectations based on their gender. The crux of this concept is in comprehending the intricate role of gender which in turn shapes one's identity. The concept of 'gender' is a socially constructed norm that dictates the behaviors, from traditionally 'masculine' and 'feminine' actions. Gender plays a significant role in shaping society. An individual's identity plays a significant role in shaping their sexuality and professional pursuits. This paper examines this notion through the prism of the play <i>Dance Like a Man</i>. The present paper explores the internal struggles of individuals in the Mahesh Dattani's groundbreaking play <i>Dance Like a Man</i> as they navigate their identities in a society full of constraints. As the characters strive to break free from gender stereotypes, they also confront the pressures and opinions of their families and community. By boldly defying societal expectations and following their passion for dance, the characters not only challenge strict norms, but also challenge damaging stereotypes that limit individuals from pursuing their dreams. Moreover, it also addresses the question that how does the play boldly challenges the conventional notions of masculinity through the character of Jairaj who stands in opposition to patriarchal standards.</p> <p>Keywords: Identity, Patriarchy, Gender Disparity, Hegemony, domestic discord</p>
Title of the Paper/Vol./No./ Page	Tangles of 'Framed' Identity in <i>Dance Like a Man</i> : Extirpating Gender Stereotypes		
Department of the Teacher	English		
Name of the Journal	INTERNATIONAL JOURNAL OF NOVEL RESEARCH AND DEVELOPMENT (UNRD)		
Year of Publication	2024		
ISSN	2456-4184		
Link of the recognition in UGC enlistment of the Journal			
4.	Name of the Author	Priya Dubey	 <p style="text-align: center;">International Journal for Multidisciplinary Research (IJFMR) E-ISSN: 2582-2160 • Website: www.ijfmr.com • Email: editor@ijfmr.com</p> <p style="text-align: center;">A Reflection of Dreams & Racial Discrimination in August Wilson's Play <i>Fences</i>: A Retrospective Study</p> <p style="text-align: center;">Miss Priya Dubey¹, Dr. Raju Parghi²</p> <p style="text-align: center;">¹D.Phil. Research Scholar, Department of English & Modern European Languages, University of Allahabad, Prayagraj-211002 ²Assistant Professor, Department of English & Modern European Languages, University of Allahabad, Prayagraj-211002</p> <p>Abstract</p> <p>This article explores the portrayal of the disillusionment of dreams and racial discrimination experienced by oppressed and marginalised African Americans in August Wilson's play <i>Fences</i>. The objective of this study is to examine the impact of the dysfunctional American Dream and the discrimination faced by Troy Maxson and his family, with the intention of using them as a representative of the African-American community. This study examines the strategies employed by African American immigrants in their pursuit of success and the realisation of their aspirations. African Americans got engaged in a significant migration from the southern states to the northern states in order to enhance their life prospects. In spite of the prevailing conditions of poverty, bigotry, and slavery prevalent in the southern states, it became evident that the circumstances were far direr. The prevalence of racial segregation and the perception of African Americans as marginalised individuals within the White community have hindered their ability to achieve economic advancement and attain the American Dream. The present paper aims to examine the multifaceted interpretation of the American Dream as depicted in the play <i>Fences</i> by August Wilson. However, this study also presents evidence to support the argument that African-Americans, being perceived as marginalised individuals within a predominantly white society, face significant barriers in achieving financial prosperity and other components of the American Dream.</p> <p>Keywords: African American, Poverty, The American Dream, Racial Discrimination, Marginalization, Family.</p> <p>This paper explores the aspirations and expectations of marginalised community of the African American. August Wilson, a highly esteemed African American playwright who lived from 1945 to 2005, exerted significant influence over The American Theatre throughout the period spanning from the 1980s to 2005. Numerous African American writer including Lorraine Hansberry, Ntozake Shange, Jeremy O. Harris, Suzan Lori Parks and Lynn Nottage have similarly depicted the challenges and discrimination faced by their community in their literary works. However, Wilson's portrayal of the hardships endured by black individuals encompasses a broader scope, addressing the marginalisation experienced by this group in a manner that resonates universally. This approach reflects his deep-seated social and cultural</p> <p style="text-align: center;">IJFMR2308645 Volume 5, Issue 8, November-December 2023 1</p>
Title of the Paper/Vol./No./ Page	A Reflection of Dreams & Racial Discrimination in August Wilson's Play <i>Fences</i> : A Retrospective Study		
Department of the Teacher	English		
Name of the Journal	International Journal for Multidisciplinary Research		
Year of Publication	2023		
ISSN	2582-2160		
Link of the recognition in UGC enlistment of the Journal	www.ijfmr.com Email: editor@ijfmr.com		

5.	Name of the Author	Dr Shailendra Kumar Singh
	Title of the Paper/Vol./No./ Page	Social Media Aur Uska Samajik Prabhav, 20(1)
	Department of the Teacher	Sociology
	Name of the Journal	Journal of Advances and scholarly Researches in Allied Education
	Year of Publication	2023
	ISSN	22307540
	Link of the recognition in UGC enlistment of the Journal	





6.	Name of the Author	Dr Shailendra Kumar Singh
	Title of the Paper/Vol./No./ Page	Dr. Bhimrao Ambedkar and Social Justice, 8(12)
	Department of the Teacher	Sociology
	Name of the Journal	Innovation: The Research Concept
	Year of Publication	2023
	ISSN	2456-5474
	Link of the recognition in UGC enlistment of the Journal	



7.	Name of the Author	Surya Prakash Verma	<p><i>Original Article</i></p> <p>Untouchables in Love: An Investigation of Rebellion against Casteism in Nagraj Manjule's Select Features</p> <p>Contemporary Voice of Dalit 1-12 © The Author(s) 2023 Article reuse guidelines: sagepub.com/journals-permissions-india DOI: 10.1177/4532285231187767 journals.sagepub.com/home/ncv Sage</p> <p>Surya Prakash Verma¹ and Binod Mishra²</p> <p>Abstract The present article aims at analysing the revolutionary function of love in Marathi filmmaker Nagraj Manjule's (b. 1978) selected feature films. The first two of Manjule's feature films are set in a society ingrained in the vicious circle of the caste system. <i>Fandry</i> (2013) portrays the one-sided love story of a boy, and <i>Sarot</i> (2016) is based on the heart-rending story of Honour Killing in a realized love-relationship between a lower-caste boy and an upper-caste girl. In contemporary India, the unprivileged people, whom the four-tier caste system addresses as untouchable, have been conditioned to eat, wear, work, and form human relationships in a particular manner that serves the purpose of casteism. The article will further explore how falling in love works as a constructive vehicle to carry forward the rebellion of both the protagonists against the inhuman norms of the destructive system. To discuss the nature of love in the films under discussion, the article takes the philosophical background from <i>In Praise of Love</i> (2009) by Alain Badiou, and <i>The Radicality of Love</i> (2015) by Srećko Horvat, at the same time, it takes its arguments against casteism from the ideas of Jyotirao Govindrao Phule (1827-1890), Babasaheb Bhimrao Ambedkar (1891-1956), and other alike thinkers in this line.</p> <p>Keywords Anti-caste cinema, casteism, love, Marathi cinema, Nagraj Manjule, rebellion</p> <p>Life and Time of Nagraj Manjule India is a country that is based in caste and class discriminations. Caste is primarily decided by economic factors—dynamic in nature which an individual can change by applying external efforts. On the contrary, caste is a social factor which is decided by one's birth and unlikely to alter. In India, if one is born poor, they can overcome it by becoming rich but the condemnation of being born as an untouchable cannot be altered in a lifetime. Nagraj Manjule (b.1978), through his films, addresses the problems that the people from unprivileged castes face in India.</p> <p><small>¹Department of English, Baiswara Degree College, Raebareli, Uttar Pradesh, India ²Department of Humanities and Social Sciences, Indian Institute of Technology Koorli, Koorli, Uttarakhand, India</small></p> <p><small>Corresponding author: Surya Prakash Verma, Department of English, Baiswara Degree College, Lalganj, Raebareli, Uttar Pradesh 229206, India. E-mail: surya2145326@gmail.com</small></p>
	Title of the Paper/Vol./No./ Page	Untouchables in Love: An Investigation of Rebellion against Casteism in Nagraj Manjule's Select Features	
	Department of the Teacher	English	
	Name of the Journal	Contemporary Voice of Dalit (Sage)	
	Year of Publication	2023	
	ISSN	24560502	
	Link of the recognition in UGC enlistment of the Journal		
8.	Name of the Author	Surya Prakash Verma	<p> Journal of the Asiatic Society of Mumbai ISSN : 0972-0766</p> <p>UGC Care Group I Journal</p> <p>IDEOLOGY AND ALIENATION: AN EXPLORATION OF MARXIST ELEMENTS IN BADAL SIRCAR'S EBONG INDRAJIT</p> <p>Jaya Sharma Assistant Professor, Department of English, Government College, Rani</p> <p>Surya Prakash Verma Assistant Professor, Dept. of English, Baiswara P.G. College, Lalganj, Raebareli (Uttar Pradesh) India</p> <p>Abstract Badal Sircar belongs to a tradition that originates at the meeting point of the Progressive Writers' Movement(PWM) and the Indian Peoples' Theatre Association(IPTA). Sircar, being a supporter of free theatre or third theatre, remains a playwright of the common masses. The characters of Sircar are very often alienated: either by adhering to Ideology and consequently distancing from their nature in a Marxist way or by disapproving of Ideology based society and ending in an existential agony. The existing studies on <i>Ebong Indrajit</i> are replete with finding existential alienation. For instance, Sailaja B. Wadikar's book <i>Badal Sircar: People's Playwright</i> (2018) although deeply connects with all the possible dimensions of existential and absurdist philosophy, does not have any space for how Ideology affects the characters. And the legacy continues. The present study is prerequisite to unfold the implied Marxist base in Badal Sircar's one of the most prominent proscenium plays <i>Ebong Indrajit</i> (And Indrajit). The objective of the present article is to showcase, how existential alienation becomes extremely fatal and negative for the protagonist of <i>Ebong Indrajit</i> just because of his Ideology enabled surroundings. Furthermore, the article takes upon the task of demonstrating how and why surrendering against Ideology happens to be the only escape for the protagonist in the play and how it relates to the contemporary Capitalist society. Marx's dictum of Ideology; Lukács' concept of reification, and Sartre's idea of Bad Faith will be taken as theoretical background to this article. The secondary sources for writing this article will employ the preexisting research works on the idea of alienation as well as on Badal Sircar. The study will be textual in nature. From the very beginning of the play all the characters except Indrajit, affected by Ideology, are living in Bad Faith. All the suffering of the protagonist seems to have originated from one point which is his disharmony with all other characters. The article concludes with the proposition that both the characters in the play: one who subscribe to Ideology, and the one who doesn't subscribe to ideology suffer agony. It is because the pangs of Ideology are so subtle that no one can escape it—not even one who does not abide by it.</p> <p>Keywords: Alienation, Badal Sircar, Ideology, Third Theatre.</p>
	Title of the Paper/Vol./No./ Page	IDEOLOGY AND ALIENATION: AN EXPLORATION OF MARXIST ELEMENTS IN BADAL SIRCAR'S EBONG INDRAJIT	
	Department of the Teacher	English	
	Name of the Journal	Journal of the Asiatic Society of Mumbai	
	Year of Publication	2023	
	ISSN	0972-0766	
	Link of the recognition in UGC enlistment of the Journal		

9.	Name of the Author	Diksha Mishra	<p style="text-align: center;"><small>Swadeshi Research Foundation & Monthly Journal of Multidisciplinary Research International Peer Reviewed, Refereed, Indexing & Impact Factor - 5.2, Es-UGC S.N. 4/998 ISSN : 2394-3580, Vol. - 11, No. - 2, December - 2023, Webinar Special Issue 2nd</small></p> <hr/> <p style="text-align: center;">Impact of Social Media on Disaster Management</p> <p style="text-align: center;"><small>Diksha Mishra Assistant Professor, Department of Geography, Baiswara PG College, Lalgaon Baibareli</small></p> <p>Abstract :- Social media played an important role in all aspects of our lives as it's a fast medium to spreading information among public domain. Social media is a platform where people connect to each other on a single click. Facebook, Instagram, you-tube, twitter, whatsapp are the popular social media app where people can share information to each other. Media has plays the important roll to manage the side effects of disaster. There are so many studies who reveal the impact of social media on disaster management. In recent times, impact of social media could be assess easily in disasters like earthquake in Turkey, Covid-19 pandemic, land slide in Himalayan region and cyclone on the eastern coast and western coast of India.</p> <p>Key words :- Social media, Disaster, Disaster Management, earthquake, Pandemic.</p> <p>Introduction :- Disaster, as defined by the United Nations, is a serious disruption of the functioning of a community or society, which involves widespread human, material, economic or environmental impacts that exceed the ability of the affected community or society to cope using its own resource (UNISDR, WMO, 2012). Disaster management is how we deal with the human, material, economic or environmental impacts of said disaster. It is the process of how we "prepare for, respond to and learn from the effects of major failures". Usually a disaster occurs when a hazard impacts on vulnerable people. When a calamity doesn't negatively impact any human or natural resource it doesn't defined as disaster. So in other words we can say when a natural or human made calamities cause severe damage to the livelihood, it called as a disaster. Disaster is the result of a combination of hazards, vulnerability and inability to reduce the potential negative consequences of risk. According to nature of disaster, it could be man-made or natural disaster.</p> <p>Natural disasters and armed conflict have marked human existence throughout history and have always caused peaks in mortality and morbidity. In every old civilization, there are a lot of proof which indicated flood as disaster to human civilization. The Manu-Shraddha in Hinduism, Deucalion and Pyrrha in Greek mythology, the Genesis flood narrative, the Mesopotamian flood stories, and the Cheyenne flood story are the famous flood-myth motifs occurred in every old civilization (Andreas et al., 2023). Natural Disasters are the adverse event that results from natural processes of the earth and have immediate impacts on human health and secondary impacts causing further death and suffering. Natural disaster can be classify in following ways- Geophysical (e.g. Earthquakes, Landslides, Tsunamis and Volcanic Activity) Hydrological (e.g. Tsunami, hailstorm, landslide Avalanches and Floods) Climatological (e.g. heat wave, cold wave, Extreme Temperatures, Drought and Wildfires) Meteorological (e.g. Local storm, Tropical and extra tropical cyclones, tornadoes) Biological (e.g. Disease Epidemics and Insect/Animal Plagues)</p> <p style="text-align: right;"><small>27</small></p>
	Title of the Paper/Vol./No./ Page	Impact of Social Media on Disaster Management Vol. 11(2),27, 2023	
	Department of the Teacher	Geography	
	Name of the Journal	Swadeshi Research Foundation	
	Year of Publication	2023	
	ISSN	2394-3580	
	Link of the recognition in UGC enlistment of the Journal		
10.	Name of the Author	Naveen Singh	<p style="text-align: center;"><small>International J. Advances in Social Sciences 11(1): July - September 2023</small></p> <hr/> <p style="text-align: center;"><small>ISSN : 2347-5153 (Print) 2454-2679 (Online) DOI: https://doi.org/10.30605/ijass.2023.11.1.01 Vol. 11 Issue-03 July - September 2023</small></p> <p style="text-align: center;"><small>Available online at www.anvpublication.org</small></p> <p style="text-align: center;">International Journal of Advances in Social Sciences</p> <hr/> <p style="text-align: center;">RESEARCH ARTICLE</p> <p style="text-align: center;">हिन्दमहासागर में भारत-अमेरिका-चीन के त्रिकोणात्मक सम्बन्धों का एक अध्ययन</p> <p style="text-align: center;">Naveen Singh <small>Assistant Professor Department of Political Science, Baiswara Degree College, Lalgaon, Raebareli (UP), (Enrolled as Research Scholar in Department of Political Science, University of Allahabad, Prayagraj, U.P.)</small></p> <p style="text-align: center;"><small>*Corresponding Author E-mail: naveensingh.singh92@gmail.com</small></p> <hr/> <p>ABSTRACT: व्यतिरिक्त सत्याग्रह में ब्रिटिश सरकार ने जो नीति अपनाई उसके अनुसार समाचार पत्रों पर प्रतिबंध सूचनाओं का आदान-प्रदान तथा भारत खास करके की धारणाओं के अधीन दक्षिण किए जाने की प्रक्रियाओं के परिणाम ब्रिटिश शासन के लिए लाभदायक रहे। व्यतिरिक्त सत्याग्रह से संबंधित समाचारों के प्रकाशन पर प्रतिबंध लगाये जाने से समाचार पत्रों का प्रकाशन बंद हो गया। मध्यप्रान्त से प्रकाशित होने वाले अधिकांश समाचार ने ब्रिटिश शासन की नीतियों का अनुसरण करते हुए सत्याग्रह से संबंधित समाचारों का प्रकाशन नहीं किया। यद्यपि यह नीति जनता के भाषण तथा अभिव्यक्ति को व्यक्तितगत स्वतंत्रता के विरोधी थी परंतु भारत जैसे देश में जो उस समय ब्रिटिश साम्राज्यवाद के अधीन था यह अप्रत्याशित नहीं था। महात्मा गांधी जी ने अपने समाचार पत्र 'हरिजन' का प्रकाशन बंद धार शासन की इस नीति का विरोध अवश्य किया परंतु अधिकतर समाचार पत्र सरकार को सहयोग प्रदान करते रहे। इसी सूचनाओं के आदान-प्रदान की नीति ने ब्रिटिश सरकार को बेहतर स्थिति में ला दिया। केन्द्रीय गृह विभाग के अधीन कार्यरत सेंट्रल इंटेलिजेंस ब्यूरो के अधिकारी कांग्रेस की योजनाओं तथा गतिविधियों की जागकारी समय से पूर्व प्राप्त कर केन्द्रीय शासन को प्रेषित करते थे।</p> <p>KEYWORDS: हिंदू आफ पल्लेस, वन बेन्ट वन रोड, खांडा, मालाबार नौ सैन्य अभ्यास ।</p> <p>प्रस्तावना — हिंद महासागर दुनिया का तीसरा सबसे बड़ा जलाशय है, इसकी विशिष्ट भूवैज्ञानिक विशेषता है कि यह तीन तरफ से घेरी हुई है। यह संसार के 20.6 प्रतिशत समुद्री क्षेत्र में फैला है और 47 राष्ट्रों के तट इसकी जल को छूते हैं। यहां विश्व की एक तिहाई जनसंख्या निवास करती है। इसका उत्तर, पूर्वी व पश्चिमी भाग क्रमशः एशिया, पूर्वी अफ्रीका तथा दक्षिण पूर्वी एशिया वह आस्ट्रेलिया से घिरा है। इस महासागर के प्रमुख संघटक—लाल सागर, अरब सागर, फारस की खाड़ी, बंगाल की खाड़ी, मोजांबिक जलमार्ग तथा वृहद ऑस्ट्रेलियन खाड़ी हैं। तीन महाद्वीपों अफ्रीका एशिया तथा आस्ट्रेलिया से घिरा होने के कारण हिंद महासागर का भू राजनीतिक एवं आर्थिक महत्व बहुत अधिक है।</p>
	Title of the Paper/Vol./No./ Page	A chapter on India-US-China triangular relations in the Indian Ocean	
	Department of the Teacher	Political Science	
	Name of the Journal	International Journal of Advances in Social Sciences	
	Year of Publication	2023	
	ISSN	2347-5153 (print) 2454-2679 (online)	
	Link of the recognition in UGC enlistment of the Journal		

11.	Name of the Author	Ramesh Chandra Yadav	
	Title of the Paper/Vol./No./ Page	"Problems and Issues in the implementation of Directive Principals of State Policy	
	Department of the Teacher	Sociology	
	Name of the Journal	Positif	
	Year of Publication	2023	
	ISSN	PSJ-7550 Vol. 23 Issue, 5	
Link of the recognition in UGC enlistment of the Journal	https://positif.com		
12.	Name of the Author	Ramesh Chandra Yadav	
	Title of the Paper/Vol./No./ Page	"Importance of the Indian Constitution's Guiding Principals for Government Policy Vol.20, Issue-2	
	Department of the Teacher	Sociology	
	Name of the Journal	Ignited Minds	
	Year of Publication	2023,	
	ISSN	2230- 7540	
Link of the recognition in UGC enlistment of the Journal	http://ignited.in//a/306993		

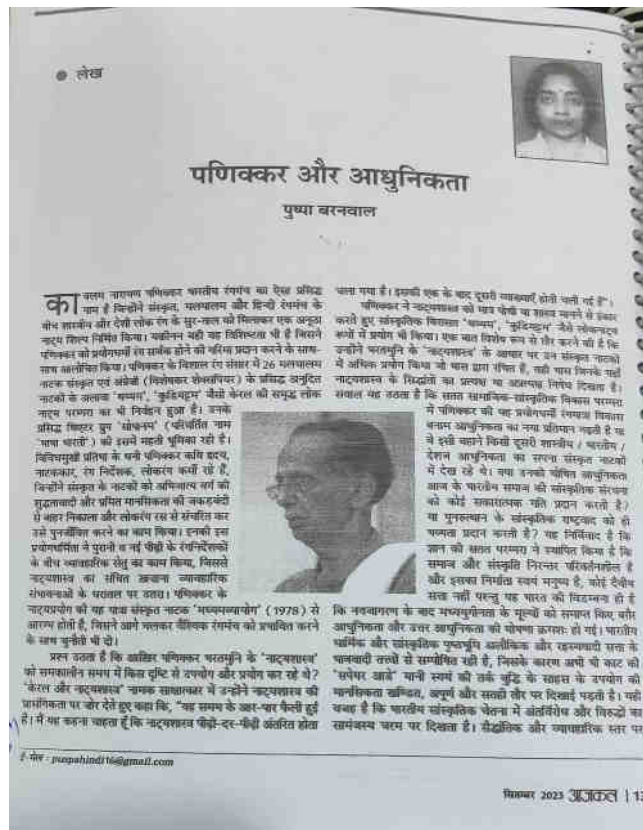
13.	Name of the Author	Dr. Puspa Baranwal
	Title of the Paper/Vol./No./ Page	Baiswara ke Ranbankure, 84,2, 110-114
	Department of the Teacher	Hindi
	Name of the Journal	Hindustani (Hindustani Acuday Prayagraj)
	Year of Publication	April-June 2023
	ISSN	0378-391X
	Link of the recognition in UGC enlistment of the Journal	www.bhartiyahindiparished.com
14.	Name of the Author	Dr. Puspa Baranwal
	Title of the Paper/Vol./No./ Page	Rangkarm ke Aaine me: Chitramohan, 23, 41-42, 297-301
	Department of the Teacher	Hindi
	Name of the Journal	Kala Vashudha (peer reviewed)
	Year of Publication	July 2023
	ISSN	2348-3660
	Link of the recognition in UGC enlistment of the Journal	https://www.kalavasudha.com



15.	Name of the Author	Dr. Puspa Baranwal	<p style="text-align: center;">श्यामसुंदर दास की दृष्टि में : कबीर पुष्पा बरनवाल</p> <p>चातु श्यामसुंदर दास का नाम लेंगे ही एक ऐसी शोधक, निष्ठावान शोधक जगत् की है, जिसने आधुनिक हिन्दी साहित्य को प्रोत्साहित व प्रचार-प्रसार में युग प्रभावीक का काम किया। उनका समय हिन्दी के लिये बहुत अनुकूल न होने के बावजूद उन्होंने व्यापक साहित्यिक, सांस्कृतिक नवसंस्करण में अपनी महत्वपूर्ण भूमिका निभायी। इनमे हिन्दी के प्रति एकतापूर्ण समर्पण और सेवा का भाव इसका संकेत था कि इंटर का निष्ठा प्राप्त करने के दौरान ही अपने दो मित्रों के सहयोग से चर्की समीति प्रचारियों साथ ही स्थापना कर ली। हिन्दी राष्ट्रभाषा के रूप में कीर्ति स्थापित हो, जन-जन तक पहुँचे, उच्च शिक्षा का माध्यम बने, इस हेतु उन्होंने लगनपूर्वक प्रयासों तक निरंतर अपना अथिपान पलायन और हिन्दी को उच्च शिक्षा में एक स्वाभाविक विषय के रूप में प्रोत्साहित किया। यही नहीं हिन्दी के छात्र छात्रावर्गों की पठन सामग्री सुदृढ़ करने हेतु अथक परिश्रम किया। न केवल अन्य बालिक साहित्यिक प्रयोगों को रचा, अलोचनार्थक: पुस्तकें लिखीं, विषय के साथ साथ, विविध आदि पर भी शोधपूर्ण दृष्टिकोण से अपना निष्ठा। पाठ्य पुस्तकों के रूप में कई दर्जन सुसंगठित पुस्तकें प्रकाशित करवा संपादन के क्षेत्र में भी चातु श्यामसुंदर दास ने अद्भुत अथिपान प्रतिभा का परिचय दिया, जिसके तहत हिन्दी साहित्य संघ का सदैव अग्रणी रहेगा। इन अथक प्रयासों के बीच उनका एक महत्वपूर्ण व उत्कल्लेखनीय योगदान 'कबीर प्रयोगकर्ता' का संपादन सुधार किया जाय है।</p> <p>यह आत्मचरित्रिक लेख है की अग्रभ्य से ही हिन्दी साहित्य जगत कबीर के प्रति उदासीनता का चिह्नक था। या कबीर की भूली-मिसरी रचनाओं को खोजने का उद्यम और साहस ही किसी में नहीं था। कुछ छोटे, सावनी आदि भी थे तो वह अनजान की स्मृतियों में चुनौतियों से पीड़ी दर पीड़ी</p> <p>सुनो-सुनो विनोदों और प्रशिक्षण संकेत के रूप में समाज में चिंतन की। हिन्दी भाषा को जगत् से बेगनंबर तक आधुनिकता की नयी भाषा में प्रतिष्ठान था कबीर जैसे असीमकारी रचनाकार के प्रति हिन्दी साहित्य के तात्कालीन समग्र लेखक प्रायः निरनुभवी के चिह्नक थे। यह चिंतनीय स्मिदनीनता थी। चर्कीक विद्वेती शोधकों के विचारों ने इस गहन अर्थित्व को बहुत पहले ही संकेत में ले लिया। जब ईस्ट इंडिया कंपनी को स्थापना की न हुई थी, कबीर अपने प्राथमिक विचारों के कारण अकालीन का संकेत बनने लगे थे। यहाँ अर्थित्व का संकेत, एक पराजित की परिचय, भूतपूर्व निषेध आदि पाठों ने ईस्ट ईंडिया-कंपनी को प्रभावित किया। उन्हें कबीर इस्पायत के आस-पास लग रहे थे। पहली बार सन 1812 ई. में कबीर पर हिन्दीय अखबार में एक जालेख प्रकाशित हुआ। इसके बाद भारत से बाहर इनपर समाज शोध कार्य आरम्भ होने लगे। 1841 ई. से लगाकर कबीर लिटिच अखबारों में प्रकाशित होने लगे थे। इनमे डॉ. सचर, विलसन साहब, रेबेक वेस्टफाल्ट, डॉ. पर्नू आदि जैसे विद्वानों के जालेख व द स्काट्समैन और द सोफीस्ट, डेली टेलीग्राफ जैसे अखबार महत्वपूर्ण हैं। "सर्वस्व स्वीकृतनाम टैगोर ने 1915 ई. में कबीर के लगन से दोहों का 'नेपोलियन डेली टेलीग्राफ (3 अक्टूबर, 1915) में अग्रणी में अनुवाद किया"। पर यह जेड निष्कर्ष का विषय भी कि हिन्दी साहित्य संसार अब भी कबीर से दूरी बनाकर चल रहा था। इसकी बड़ी बचत स्वयं कबीर की सैद्धांतिकी व पैदाइशों थी, जिसके तहत समाजविचार कुलीन राज्य वर्ग इनमे ड्रेष रखा था। कबीर का दर्शन और चिन्ता सोना भी एक बड़ी बचत थी। समाजत संपुन संविधाय को बगड़ जान की, सारंगति की, निर्गुण ब्रह्म की बात करना कुसम, वेद, पुराण, वर्णाश्रम व्यवस्था को सधनसक से परे की बात थी। कबीर के विचारों</p> <p style="text-align: right;">हिन्दुस्तानी • जुलाई-सितम्बर 2023 205</p>
Title of the Paper/Vol./No./ Page	Shyamsundar Dus ki Drishti Men Kabir, 84, 3, 205-210		
Department of the Teacher	Hindi		
Name of the Journal	Hindustani (Hindustani Acuday Prayagraj)		
Year of Publication	Sep. 2023		
ISSN	0378-391X		
Link of the recognition in UGC enlistment of the Journal	www.hindustaniacup.org.in		
16.	Name of the Author	Dr. Praveen Singh	<p>139. JOURNAL OF THE ASIATIC SOCIETY OF MUMBAI, ISSN: 0972-0766, Vol. XCVI, No.30, 2023 INDIA'S DEFENCE REFORMS AND ITS SIGNIFICANCE</p> <p>Dr. Praveen Singh Assistant Professor, Department of Defence and Strategic Studies Baijwara P.G College, Laifanji, Raebareilly, Uttar Pradesh India. Email: prvnsgn92@gmail.com</p> <p>Abstract The partition of India and Pakistan was based on the "Two Nation Theory". Since then, Pakistan became our natural enemy and our defence policies were framed concerning Pakistan. After the debacle of the 1962 war against China's PLA, the policy makers realized to bring necessary reforms in the defence sector to safeguard the national security against our two immediate neighbours. The pace of reforms in our country has been occurring at a snail's pace which has exposed us to various complex security threats. This paper focuses on the implementation of defence reforms after 2014. An attempt has also been made to look into the core concerns coming in the way of reforms and several measures are given to resolve the issues.</p> <p>Introduction The request for higher defence organization passed on by the last British Viceroy Mountbatten and his Chief of Staff Ismay for the past 70 years remains unchanged. While our political leaders and elite envision India as a "Great Power" in the community of countries their efforts are insufficient to turn this vision into reality. There was no alteration in the security apparatus in the premature years of independence because the then Nehru administration believed it competent to look after the borders and internal security. Soon after the independence our sovereignty and territorial integrity were attacked by our immediate neighbours i.e. Pakistan and China. During the reign of Pandit Nehru, our defence preparedness was proposed for only Pakistan. The threat posed by China was never perceived on a serious note and we signed the Panchsheel agreement. To foster our relations even further we worked with the spirit of "Hindi Chini Bhai Bhai". But to our surprise, China attacked India in 1962 and the defeat that came against China in the 1962 war exposed our security mechanisms on multiple fronts. This was high time that questions were raised on the efficiency of our armed forces. The criticisms were welcomed open-heartedly and the government shifted its focus on core concerns in our defence policy leading to reforms in the defence sector. The setback in the 1962 war against China gave Pakistan leverage, and we fought wars with them in 1965, 1971, and 1999. All subsequent wars were fought using lessons learned from previous conflicts. Meanwhile, several reform committees were organised to investigate all aspects of the battles we had fought. The defence reforms are ticklish with ingrained interests and bureaucratic rivalries we found it difficult to bring in rudimentary changes to our national security structure. For decades reports have disclosed the fundamental inefficiencies embedded in our military structure and processes but when it came to taking decisions status quo was maintained.</p> <p>Defence Reform Committees post-Independence Henderson Brooks Review Committee The first glimpse of defence reforms is seen after the Indo-China War of 1962 which evoked a new defence awareness in the country after years of negligence. The then Chief of Army Staff Gen. J.N Chaudhari on 14th December 1962 constituted an "OP Review" of the Indian Army's operation conducted during the Indo-China war of 1962. The review was headed by Lt. Gen. TB Henderson Brooks and aided by Brig. PS Bhagat. The review focused on: Training, Equipment, System of command, Physical fitness of troops and the capacity of commanders at all levels to influence men under their command.</p>
Title of the Paper/Vol./No./ Page	India's Defence Reforms and its significance XCVI(30), 139		
Department of the Teacher	Defense Studies		
Name of the Journal	Journal of the Asiatic Society of Mumbai		
Year of Publication	2023		
ISSN	0972-0766		
Link of the recognition in UGC enlistment of the Journal			

17.	Name of the Author	Dr. Praveen Singh	<p>Madhya Bharti - Humanities and Social Sciences UGC Care Group I Journal (मध्य भारती) ISSN: 0974-0066 Vol-84 No. 10, July – December: 2023</p> <p>THE CHINA'S PEOPLE'S LIBERATION ARMY: STRATEGIES AND ITS CAPABILITIES.</p> <p>Dr. PRAVEEN SINGH Assistant Professor, Department Of Defence And Strategic Studies, Bairawara P.G College, Lalganj, Raebareilly, Uttar Pradesh, India</p> <p>Introduction- Almost everyone is familiar with the tradition of having an army for a nation, but it seems rare for a political party. However, China's People's Liberation Army (PLA) is an exception because China's PLA is loyal to the Chinese communist party. It was in December 1929 during the 9th summit of the Chinese communist party in Gutuiyan of the Fujian province, when Mao Tse-Gung clarified that the "Red Army (Now PLA) is mainly used to serve a political purpose".</p> <p>It is interesting to note that, after 85 years at the same place (Gutuiyan), during his address at a military-political work conference, Chinese President Xi Jinping Calls "PLA, the army of the Communist Party of China" and that it must maintain full loyalty to its political leadership.</p> <p>The roots of the PLA are connected with the August 1927 Nanchang uprising. In this movement, Mao Tse-Tung, Zhou Enlai and Zhu D Ross rose against the nationalist forces. In 1949, they made the communist revolution successful and played a key role in the Chinese Communist Party coming to power. Mao Tse-Tung and Deng Xiaoping have led the PLA gloriously and under their superior command for almost half a century.</p> <p>The Chinese political system has two major wings:- 1. Communist party of China (CPC) 2. Peoples Liberation Army (PLA)</p> <p>Apart from this two major wings of CPC i.e. the Politburo & Central Committee. Two out of 25 members in Politburo and around 18 to 20% of Central Committee members (205 permanent & 171 optional) are from PLA. The central committee selects the Politburo. The Politburo standing committee is the nation's top political organization and it has 7 members.</p> <p>Central Military Commission, a commission of PLA top officials is China's top military body and PLA commander-in-chief is the chairman of the CMC and the PLA Senior officer is a member of the CPC.</p> <p>The below flow chart tells about the working mechanism of the People's Republic of China (PRC). It shows the cooperation and coordination between the Military, Party and Government of the PRC.</p> <div data-bbox="852 837 1375 1093" data-label="Diagram"> </div> <p style="text-align: center;">PARALLEL HIERARCHIES IN CHINA</p> <p>Page 94 Published by : Dr. Harisingh Gour University</p>
18.	Name of the Author	Dr. Praveen Singh	<p>Journal of the Oriental Institute M.S. University of Baroda ISSN: 0030-5324</p> <p style="text-align: center;">गुटनिरपेक्ष आन्दोलन एवं वर्तमान प्रासंगिकता</p> <p style="text-align: center;">गुणिका बैरगवा पीठजीठ कॉलेज लालगंज, रायबरेली, (उप्र) 2020 औठ प्रथीण सिठ सहायक आचार्य बैरगवा पीठजीठ कॉलेज लालगंज, रायबरेली, (उप्र) 2020</p> <p>गुटनिरपेक्ष आन्दोलन का जन्म यँ विरोधी विश्व खँमँ और शीत युद्ध के काल में हुआ। द्वितीय विश्व युद्ध के बाद एशिया, अफ्रीका एवं अन्य महाद्वीप के तमाम छोटे-बड़े देश उपनिवेशवाद के कुचक से आजाद हो रहे थे, एवं विश्व स्तर पर एक नई पहचान तलाशने में लगे थे। 1965 में बाहुन सम्मेलन के 06 वर्षों के पश्चात गुटनिरपेक्ष आन्दोलन की शुरुआत हुई।</p> <p>गुटनिरपेक्षता का सामान्य अर्थ विभिन्न शक्ति युद्धों से अलग रहते हुए अपनी स्वतंत्र निर्णय नीति और राष्ट्रीय हित के न्याय का समर्थन करना अर्थात् किसी भी देश विशेष के साथ सैन्य गुटबन्दी में सम्मिलित ना होना, आक्रामक राशि से दूर रहना, शीत युद्ध से अलग-एवं राष्ट्रीय हित का ध्यान रखते हुए न्यायोचित पक्ष में अपनी विदेश नीति का संचालन करना ही गुटनिरपेक्षता है। द्वितीय विश्व युद्ध के बाद 1961 में तीन खचितियों में से भारत के पंडित जवाहरलाल नेहरू, मिश्र के कर्नल नारिंर एवं युगोस्लाविया के मार्शल टिटो ने इस नीति का समर्थन करने वाले राष्ट्रों का एक गुट बनाकर 'निर्गुट आन्दोलन' को जन्म दिया, जो सामाज्यवादी एवं साम्यवादी गुटों से पृथक रहा। तत्कालीन समय में निर्गुट आन्दोलन की सदस्यता हेतु पाँच सिद्धान्त स्वीकार किए गए थे- (1) सदस्य राष्ट्र स्वतंत्र नीति पर चलता हो। (2) सदस्य राष्ट्र उपनिवेशवाद का विरोध करता हो। (3) सदस्य राष्ट्र किसी सैनिक गुट का सदस्य ना हो। (4) सदस्य राष्ट्र के किसी बड़ी ताकत के साथ द्विपक्षीय सम्मोक्षा ना किया हो। (5) सदस्य राष्ट्र ने किसी बड़ी ताकत को अपने क्षेत्र में सैनिक अड्डा बनाने की अनुमति ना दी हो।</p> <p>जँजँ सिस्का सम्मोक्षा पहला सामाज्यकैवैज्ञानिक था जिसने इस धारणा को वैज्ञानिक परिपेक्ष में सम्झाने का प्रयास किया, किन्तु धारणा की व्यापकता पूर्ववर्त के आधार पर पाश्चात्य एवं तैर पाश्चात्य बुद्धिजीवियों को एक दृष्टिकोण विशेष से आन्दोलन को देखने की बाध्य करती है। सामारणतः गुटनिरपेक्षता की यह धारणा तटस्थता की पर्यायवाची भी समझी जाती है, जबकि अत्येक दृष्टिकोण भिन्न है। तटस्थता एक ऐसी विचारधारा है जो गुटनिरपेक्षता के बहुत समीप है। दोनों में केवल एक समानता है-शीत युद्ध के समय सघर्ष से अलग रहना, किन्तु सघर्ष के समय तटस्थता का अर्थ है युद्ध से अलग रहना, जबकि गुटनिरपेक्षता का अर्थ न्याय के समर्थन में जचित सिद्धान्त का प्रतिपादन करना है।</p> <p>यह आन्दोलन तटस्थतावादी आन्दोलन से भिन्न है तथा साम्राज्यवाद, उपनिवेशवाद एवं नव उपनिवेशवाद के विरुद्ध है। समोक्ष विश्व शान्ति में बाधक अन्तर्राष्ट्रीय तनाव एवं टकराव के यही मुख्य खेत है। इस आन्दोलन को सबसे बड़ी विशेषता यह है कि यहाँ फँसले परस्पर सहमति के आधार होते हैं, बहुमत के आधार पर नहीं। इसको अतिरिक्त बाकि सातुलन की धारणा को विपरीत गुटनिरपेक्षता की अकारणता में निहित 4 स्पष्ट पहलू हैं जो राज्य विशेष को इस धारणा में आस्था उत्पन्न करने का वातावरण तैयार करते हैं। सर्वप्रथम विश्व राजनीति में स्थाई सातुलन शक्ति राजनीति के अभाव में ही स्थापित किया जा सकता है। दूसरे, शक्ति सातुलन स्थापित करने की हौक का प्राथमिक सन्दर्भ, आक्रामक एवं अविश्वास के कारण होता है। इस प्रकार वातावरण की बुद्धि उपयुक्तता राष्ट्र की उत्तरेक भूमिका से सम्भव है क्योंकि यह राष्ट्र पूर्णगरी से लगभग मुक्त होते हैं, तीसरे गुटों के मध्य प्रतिद्वंद्विता नए राष्ट्र की परिस्थितियों के लिए असासंगिक तथा उनकी आवश्यकताओं की पूर्ति के लिए हानिकारक है तथा, उनके शान्तिपूर्ण विकास के लिए मार्ग में बाधा उत्पन्न करती है। चौथे शक्ति सातुलन की मानना प्रतिसिद्धि है और उसका आधार सहायता एवं न्याय के मध्य यथास्थिति बनाए रखना है जो आजकल अतिक्रिस्त राज्यों की भाँसी प्रगति में स्वाभाविक बाधा है।</p> <p>किसी राष्ट्र विशेष की नीति अथवा धारणा के प्रति आकर्षित करने के उत्तरदायित्व कुछ प्रेरणाओं तथा सामाजिक परिस्थितियों के हैं। विश्वम हैदरन में परिधारीकरण का विशेष रूप प्राण स्फात्रता को स्वाधित्व देने का सकल्प, मानवों की प्रगाइता, विदेशी व्यवहार की अज्ञानता आदि प्रेरणाओं को मुख्य माना है। इसके अतिरिक्त</p>

19.	Name of the Author	Dr. Puspa Baranwal
	Title of the Paper/Vol./No./ Page	Panikkar Aur Adhunikta, 79,5,13-15
	Department of the Teacher	Hindi
	Name of the Journal	Aajkal (UGC Care Listed)
	Year of Publication	Sep. 2023
	ISSN	0971-8478
	Link of the recognition in UGC enlistment of the Journal	www.publicationdivison.nic.in
20	Name of the Author	Surya Prakash Verma
	Title of the Paper/Vol./No./ Page	En/gendering Resistance through Silence: Revisiting the Character of <i>Balo</i> in Mani Kaul's <i>Uski Roti</i>
	Department of the Teacher	English
	Name of the Journal	Literary Voice
	Year of Publication	2022
	ISSN	22774521
	Link of the recognition in UGC enlistment of the Journal	



En/gendering Resistance through Silence: Revisiting the Character of *Balo* in Mani Kaul's *Uski Roti*

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Abstract.

The present article explores the efficiency of the idea of implied silence in Mani Kaul's film Uski Roti. Furthermore, it analyses how the passive resistance of the characters impacts the audience more than their active participation. The subtle employment of silence in the film that emerges as passive resistance is camouflaged in the female protagonist Balo. A majority of Indian women are conditioned in a way which makes them incapable of active resistance against the highly self-destructive patriarchal society. Balo's silence leaves the audience in a state of disturbance. The article dwells on the following propositions: (1) To disturb the audience is more formative than to inspire them. (2) Silence speaks more than the voices, and absence becomes more prominent than presence. Moreover, Kennan Ferguson's view of 'constitutive silence' has been taken as supportive proposition to the present article. Keywords: Indian New Wave, Mani Kaul, Passive-Resistance, Silence, Uski Roti, Women

The Anatomy of *Uski Roti* [Our Daily Bread]

Mani Kaul, an Indian filmmaker, and a student of legendary Ritwik Ghatak, adapted a story "Uski Roti" into a film. The story was written by Mohan Rakesh, a pioneer of Nayi Kahani Movement in Hindi Literature. Kaul was only twenty-five when he made *Our Daily Bread*, the first of his feature films. It was a film which brought Kaul the 1970 Filmfare Critics Award for Best Movie. Since then, the film has become an essential part of Indian New Wave Cinema, and it has been praised by many of his contemporaries.

Indian New Wave of Cinema came into existence with Mrinal Sen's *Bhuvan Shome* (1969) and Shyam Benegal's *Ankur* (1974). "In the late 1960s and 1970s, it became a wave

21	Name of the Author	Sanjeev Kumar
	Title of the Paper/Vol./No./ Page	Bihar Assembly Elections after Emergency: An Analytical Study
	Department of the Teacher	Political Science
	Name of the Journal	Newman (international Journal of the Multidisciplinary Studies)
	Year of Publication	Sep. 2022
	ISSN	2348-1390
	Link of the recognition in UGC enlistment of the Journal	

New Man International Journal of Multidisciplinary Studies (NM/IMS) ISSN: 2348-1390

9.

आपातकाल के बाद का बिहार विधानसभा चुनाव: एक विश्लेषणात्मक अध्ययन

संजीव कुमार
शोध छात्र, राजनीति विज्ञान विभाग, कौशंगा विश्वविद्यालय, रामपुर, छत्तीसगढ़
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शोध सारांश
आपातकाल के दौर में हुए लोकसभा चुनाव के विश्लेषण के लिए एक विश्लेषणात्मक अध्ययन प्रस्तुत किया गया है। इस अध्ययन में बिहार के विधानसभा चुनाव के आराखड़े से लेकर प्रत्यक्ष चुनाव तक की प्रक्रिया का विश्लेषण किया गया है। इसमें बिहार के राजनीतिक दलों के चुनाव के लिए किए गए प्रयासों का विश्लेषण भी किया गया है।

प्रस्तावना
आपातकाल के दौर में हुए लोकसभा चुनाव का विश्लेषण करने के लिए एक विश्लेषणात्मक अध्ययन प्रस्तुत किया गया है। इस अध्ययन में बिहार के विधानसभा चुनाव के आराखड़े से लेकर प्रत्यक्ष चुनाव तक की प्रक्रिया का विश्लेषण किया गया है। इसमें बिहार के राजनीतिक दलों के चुनाव के लिए किए गए प्रयासों का विश्लेषण भी किया गया है।

क्र. संख्या	राज्य/केंद्र	उम्मीदवारों की संख्या	पुरुष	महिला	कुल
1	अंध्र प्रदेश	21	21	0	21
2	आंध्र प्रदेश	36	4	32	36
3	आंध्र प्रदेश	386	32	354	386
4	आंध्र प्रदेश	311	29	282	311
5	आंध्र प्रदेश	8	0	8	8
6	आंध्र प्रदेश	1	0	1	1
7	आंध्र प्रदेश	1	0	1	1
8	आंध्र प्रदेश	31	2	29	31
9	आंध्र प्रदेश	21	1	20	21
10	आंध्र प्रदेश	1	0	1	1
11	आंध्र प्रदेश	5	0	5	5
12	आंध्र प्रदेश	28	1	27	28
13	आंध्र प्रदेश	8	0	8	8
14	आंध्र प्रदेश	1	0	1	1
15	आंध्र प्रदेश	223	24	199	223
	कुल	394	124	270	394

संज्ञक परिचय: चुनाव प्रक्रिया, 1977.

VOL. 9 | ISSUE 9 | September 2022 52 www.newmanjournal.com

22.	Name of the Author	Sanjeev Kumar
	Title of the Paper/Vol./No./ Page	Indian politics before alliance and beginning of alliance in Indian politics
	Department of the Teacher	Political Science
	Name of the Journal	Chronicle of Humanities and Cultural Studies
	Year of Publication	Dec. 2022
	ISSN	2454-5503
	Link of the recognition in UGC enlistment of the Journal	

CHRONICLE OF HUMANITIES & CULTURAL STUDIES (CHCS) ISSN: 2454-5503 Impact Factor: 4.197 (IIJIF)

18

गठबंधन से पूर्व भारतीय राजनीति एवं भारतीय राजनीति में गठबंधन का प्रारंभ

संजीव कुमार
शोध छात्र, राजनीति विज्ञान विभाग, कौशंगा विश्वविद्यालय, रामपुर, छत्तीसगढ़
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शोध सारांश
प्रस्तुत शोध पत्र भारतीय राजनीति में गठबंधन काल से सम्बन्धित है। प्रस्तुत शोध पत्र में गठबंधन से पहले बनने का प्रयास किया गया है कि गठबंधन से पूर्व भारतीय राजनीति किस प्रकार की थी तथा भारतीय राजनीति में गठबंधन काल का आरम्भ कब से हुआ। भारत के संविधान के निर्माण में कांग्रेस तथा अन्य प्रमुख दलों का अग्रणी भूमिका का उल्लेख भी किया गया है।

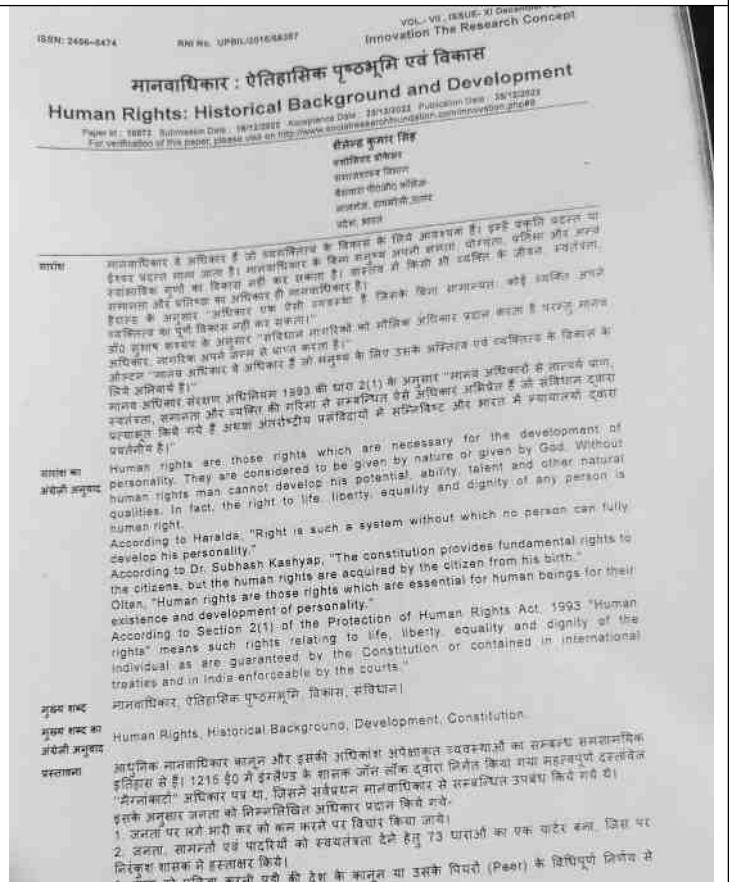
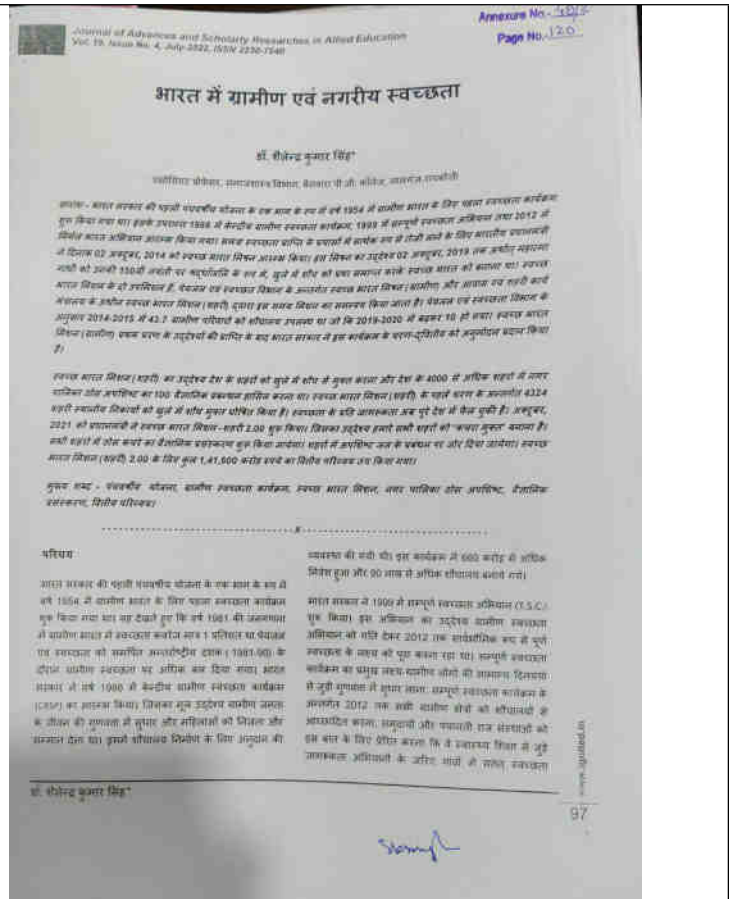
प्रस्तावना
प्रस्तुत शोध पत्र भारतीय राजनीति में गठबंधन काल से सम्बन्धित है। प्रस्तुत शोध पत्र में गठबंधन से पहले बनने का प्रयास किया गया है कि गठबंधन से पूर्व भारतीय राजनीति किस प्रकार की थी तथा भारतीय राजनीति में गठबंधन काल का आरम्भ कब से हुआ। भारत के संविधान के निर्माण में कांग्रेस तथा अन्य प्रमुख दलों का अग्रणी भूमिका का उल्लेख भी किया गया है।

गठबंधन से पूर्व भारतीय राजनीति एवं भारतीय राजनीति में गठबंधन का प्रारंभ
गठबंधन से पूर्व भारतीय राजनीति में गठबंधन का प्रारंभ कब से हुआ। भारत के संविधान के निर्माण में कांग्रेस तथा अन्य प्रमुख दलों का अग्रणी भूमिका का उल्लेख भी किया गया है।

गठबंधन से पूर्व भारतीय राजनीति एवं भारतीय राजनीति में गठबंधन का प्रारंभ
गठबंधन से पूर्व भारतीय राजनीति में गठबंधन का प्रारंभ कब से हुआ। भारत के संविधान के निर्माण में कांग्रेस तथा अन्य प्रमुख दलों का अग्रणी भूमिका का उल्लेख भी किया गया है।

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23.	Name of the Author	Dr Shailendra Kumar Singh
	Title of the Paper/Vol./No./ Page	Bharat mein Gramin Evam Nagriya Swachhhta, 19(4),97
	Department of the Teacher	Sociology
	Name of the Journal	Journal of Advances and scholarly Researches in Allied Education
	Year of Publication	2022
	ISSN	22307540
	Link of the recognition in UGC enlistment of the Journal	
24.	Name of the Author	Dr Shailendra Kumar Singh
	Title of the Paper/Vol./No./ Page	Human Rights: Historical Background and Development,7(11)
	Department of the Teacher	Sociology
	Name of the Journal	Innovation: The Research Concept
	Year of Publication	2022
	ISSN	2456-5474
	Link of the recognition in UGC enlistment of the Journal	



25	Name of the Author	Satendra Kumar Singh
	Title of the Paper/Vol./No./ Page	Amethi Jaanpad ki Jansankhyaki Visheshtayen
	Department of the Teacher	Political Science
	Name of the Journal	Chronicle of Humanities and Cultural Studies
	Year of Publication	Dec. 2022
	ISSN	2454-5503
	Link of the recognition in UGC enlistment of the Journal	
26.	Name of the Author	Satendra Kumar Singh
	Title of the Paper/Vol./No./ Page	Samudayik Vikaskhand Bhetuwa ki Jannankiya Visheshta
	Department of the Teacher	Geography
	Name of the Journal	Newman (international Journal of the Multidisciplinary Studies)
	Year of Publication	Sep. 2022
	ISSN	2348-1390
	Link of the recognition in UGC enlistment of the Journal	

CHRONICLE OF HUMANITIES & CULTURAL STUDIES (CHCS) | ISSN: 2454-5503 | Impact Factor: 4.197 [IIJIF]

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अमेठी जनपद की जनसांख्यिकी विशेषताएं

सतेन्द्र कुमार सिंह
(शोध छात्र कसिप विश्वविद्यालय, रामपुर, छत्तीसगढ़)
डॉ० पी० राजेश्वर
(ऑनस्टेट प्रोफेसर कसिप विश्वविद्यालय रामपुर)

शोध सारांश:
किसी क्षेत्र विशेष में निवास करने वाले लोगों की संख्या को जनसंख्या कहते हैं। जो समय के साथ परिवर्तनशील होती है। यह परिवर्तन धनात्मक एवं ऋणात्मक दोनों हो सकता है। मानव जनसंख्या का अध्ययन ही जनसांख्यिकी कहलाता है। जिसके अंतर्गत हम जनसंख्या के आकार, संरचना, वितरण, जन्म प्रवास, मृत्यु आदि का अध्ययन स्वयं और काल के संदर्भ में करते हैं। प्रस्तुत शोध पत्र उत्तर प्रदेश के नवीनतम जिला अमेठी की जनसांख्यिकी विशेषताओं के भौगोलिक विश्लेषण पर आधारित है। जिसमें जनपद की जनसंख्या के आकार, संरचना, वितरण, जन्म, मृत्यु प्रवास आदि का विश्लेषण प्रस्तुत किया गया है।

जनसंख्या जलवायु अर्थशास्त्र महत्वपूर्ण होता है, क्योंकि इसके द्वारा क्षेत्र के आर्थिक-सांख्यिक-राजनीतिक तथा सांस्कृतिक गतिशीलता का आकलन करते हैं। अमेठी जनपद उत्तर प्रदेश का नवीन जिला है। इसका गठन 01 जुलाई 2010 में उत्तर प्रदेश के 72 में जिलों के रूप में हुआ। अमेठी जनपद में कुल 4 तहसीलें और 13 विकास खण्ड हैं। यह जनपद उत्तर गंगा मैदान की पूर्वी भाग में स्थित है। जिनमें समग्र तब से औसत ऊंचाई 101 मीटर है। अमेठी का कुल भौगोलिक क्षेत्रफल लगभग 2329.11 वर्ग किलोमीटर है, जो उत्तर प्रदेश के कुल क्षेत्रफल का मात्र 0.95 प्रतिशत है। जहां उत्तर प्रदेश की कुल जनसंख्या का 0.93 प्रतिशत निवास करती है। इसके उत्तर में कैलाश, पश्चिम में प्रतापगढ़, पश्चिम में बाराबंकी तथा पूर्व में सुल्तानपुर जनपद की सीमाएं मिलती हैं। जनपद की कुल जनसंख्या 1867676 है। जिसमें पुरुष जनसंख्या 845235 तथा स्त्री जनसंख्या 922443 हैं। जनपद में अनुसूचित

जाति/जनजाति तथा जनसंख्या क्रमशः 471387, 239936 तथा 106268 हैं।
Tijl (1.0.0) जनसंख्या वृद्धि का आकार किसी क्षेत्र में लोगों की बढ़ने वाली संख्या में है। 1901 में अमेठी जनपद के जनसंख्या आने वाली चारों तरफों में भीरीनाज, मुसाफिरवाग, शिराई और अमेठी की कुल जनसंख्या 1092273 थी जो कि 1951 की जनगणना में बढ़कर 1292949, 2001 की जनगणना में 3237141 और 2011 की जनगणना में 1867678 हो गयी। जो उत्तर प्रदेश की कुल जनसंख्या 199812341 का 0.93 प्रतिशत है।

संक्षेपः जनसंख्या वृद्धि दर 1901-2011

वर्ष	कुल जनसंख्या	जनसंख्या वृद्धि दर प्रतिशत में
1901	1092273	-
1911	1098550	3.27
1921	1012056	4.21
1931	1060050	4.74
1941	1130433	4.78
1951	1252949	10.43
1961	1412304	8.28
1971	1642628	16.27
1981	2042778	24.9
1991	2598970	26.3
2001	3237141	28.3
2011	1867678	-42.3

Source: 11th C.I. (2011-2019) and 2019 Census
तालिका एक की स्पष्ट है कि 1911 और जनपद की दसवीं की जनसंख्या वृद्धि दर अपेक्षाकृत रही है। इसके पश्चात 1951 ई० तक इसमें वृद्धि देखी गई है 2001 में जनपद की दसवीं वृद्धि दर 26.3 प्रतिशत दर्ज की गई। उत्तर प्रदेश की दसवीं वृद्धि दर 26.5 प्रतिशत से अधिक की 2011 की जनगणना में जनपद की दसवीं वृद्धि दर में तेज गिरावट दर्ज की गई और यह घटकर -42.5 प्रतिशत तक पहुंच गई।

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10.

सामुदायिक विकास खण्ड भेटुवा(जनपद अमेठी) की जनसांख्यिकी विशेषता

सतेन्द्र कुमार सिंह
(शोध छात्र कसिप विश्वविद्यालय)
डॉ० पी० राजेश्वर
(ऑनस्टेट प्रोफेसर कसिप विश्वविद्यालय रामपुर)

प्रस्तावना:-
किसी क्षेत्र के लिए जनसंख्या या जनसांख्यिकी विशेषताओं का अध्ययन अर्थशास्त्र महत्वपूर्ण होता है, क्योंकि इसके द्वारा ही हम उस क्षेत्र के आर्थिक, सामाजिक, राजनीतिक तथा सांस्कृतिक गतिशीलता का आकलन करते हैं। किसी क्षेत्र विशेष में एक निश्चित अवधि में निवास करने वाले लोगों की संख्या में होने वाला परिवर्तन जनसंख्या गतिशीलता कहलाता है। यह परिवर्तन धनात्मक या ऋणात्मक हो सकता है। वास्तव में किसी क्षेत्र की जनसांख्यिकी विशेषताओं के अंतर्गत हम उस क्षेत्र की कुल जनसंख्या, जनसंख्या वृद्धि दर, साक्षरता, लिंगानुपात जनपदन आदि का विश्लेषण करते हैं। प्रस्तुत शोध पत्र में इनकी सन्दर्भ में अध्ययन क्षेत्र की जनसांख्यिकी विशेषताओं का भौगोलिक विश्लेषण किया गया है।

अध्ययन का उद्देश्य:-
प्रस्तुत अध्ययन का मुख्य उद्देश्य शोध क्षेत्र की विगत तीन दशकों की जनसंख्या में हुए परिवर्तन का विश्लेषण करना है, जिससे हम अलग-थकी बनी जनसंख्या विशेषताओं के समझे आने वाली चुनौतियों के लिए के उपयुक्त रणनीति बना सकें।

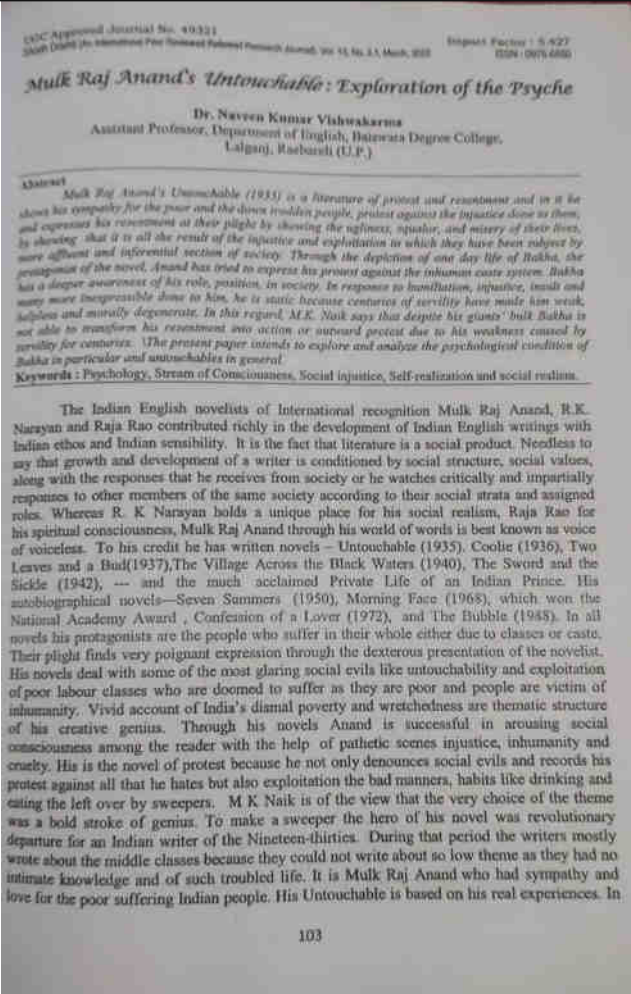
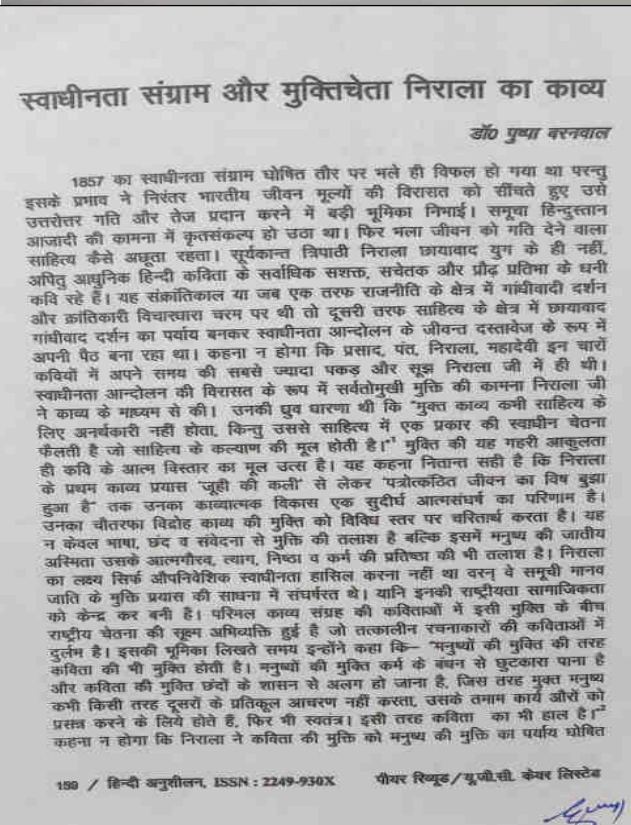
अध्ययन का विधि तंत्र :-
प्रस्तुत अध्ययन विकास खण्ड की विगत तीन दशकों (1981, 2001, 2011) की जनगणना आंकड़ों के विश्लेषण पर आधारित है। स्पष्ट है कि प्रस्तुत शोध में विश्लेषणात्मक विधितंत्र का प्रयोग किया गया।

अध्ययन क्षेत्र:-
भेटुवा विकास खण्ड अमेठी जनपद का एक समुदायिक विकास खण्ड है। यह जनपद अमेठी के अमेठी तहसील के अंतर्गत आने वाले चार विकास खण्डों में से एक है। इस विकास खण्ड की उत्तरी-पूर्वी सीमा का निर्धारण सुल्तानपुर जनपद दक्षिणी सीमा का निर्धारण बादर विकास खण्ड तथा अमेठी तहसील के अंतर्गत पश्चिमी सीमा का निर्धारण भीरीनाज तथा शाहपुर विकास खण्ड की सीमा द्वारा होता है। प्रस्तुत अध्ययन क्षेत्र का कुल भौगोलिक क्षेत्रफल 51.45 वर्ग किमी है। 2011 की जनगणना के अनुसार इस विकास की कुल जनसंख्या 166220 थी जिसमें 82320 महिलाएं और 83900 पुरुष हैं। इस क्षेत्र में अनुसूचित जाति तथा जनजातों की जनसंख्या क्रमशः 95258 तथा 13 है।

सामुदायिक विकास खण्ड भेटुवा में कुल 3: न्यायपर्याप्तों कोरारी बीराहा, पश्चिम दुआरा, बाईं पायी, अमरपायी, भेटुआ तथा पैरिखुर है। इन न्यायपर्याप्तों के अंतर्गत 09 ग्राम पंचायतें शामिल हैं। बाईं पायी तथा पैरिखुर न्यायपर्याप्तों की संख्या के आधार पर सबसे बड़ी न्यायपर्याप्त है। इनके अंतर्गत सोहन-सोहन ग्राम पंचायतें शामिल हैं। जबकि कोरारी बीराहा इस विकास खण्ड की सबसे छोटी न्यायपर्याप्त है। जिसके अंतर्गत पांच ग्राम तथा शामिल हैं। विकास खण्ड की सभी न्यायपर्याप्तों के क्षेत्रफल, कुल जनसंख्या, दसवीं वृद्धि दर तथा जनसंख्या की लालिका 09 में प्रदर्शित किया गया है। जिसमें क्षेत्रफल की दृष्टि से अमरपायी सबसे बड़ी न्याय पर्याप्त है। जहां अध्ययन क्षेत्र की 25025 जनसंख्या निवास करती है। जनसंख्या की दृष्टि से भी यह इस विकास खण्ड की सबसे बड़ी न्यायपर्याप्त है, जबकि बाईंपायी क्षेत्रफल तथा कोरारी बीराहा जनसंख्या की दृष्टि से सबसे छोटी न्याय पर्याप्त है।

तालिका 09 विकास खण्ड भेटुवा, न्यायपर्याप्तों का कुल क्षेत्रफल, कुल जनसंख्या, दसवीं वृद्धि दर तथा जनसंख्या घनत्व

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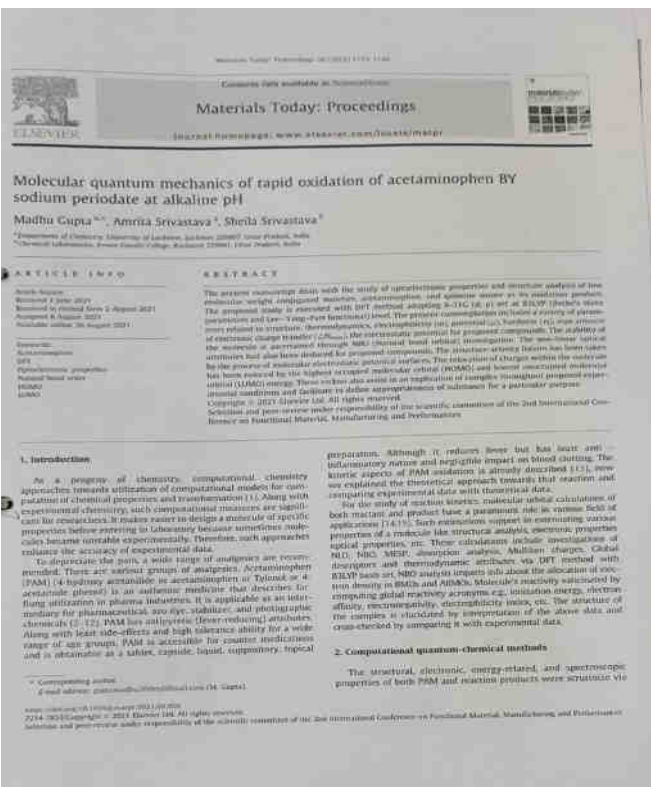
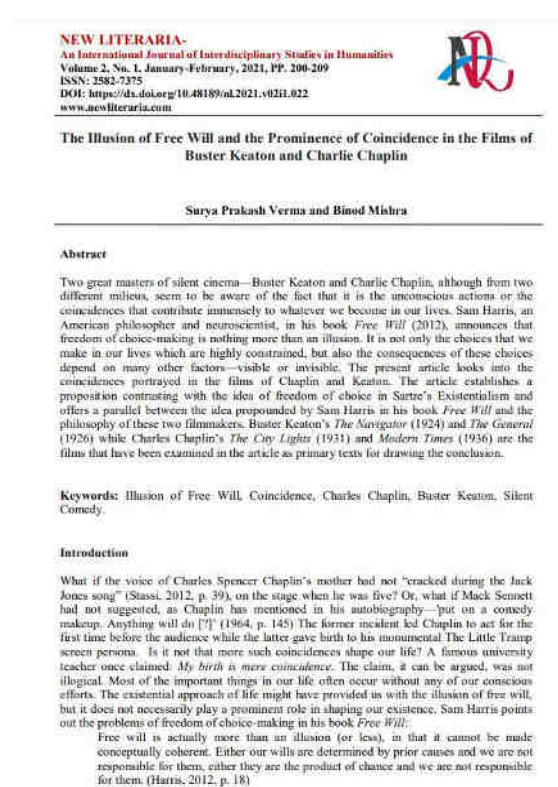
27.	Name of the Author	Dr. Naveen Kumar Vishvakarma	
Title of the Paper/Vol./No./ Page	Mulk Raj Anand's Untouchable: Exploration of the Psyche		
Department of the Teacher	English		
Name of the Journal	Shodh Dristi		
Year of Publication	2022		
ISSN	0976-6650		
Link of the recognition in UGC enlistment of the Journal			
28	Name of the Author	Dr. Puspa Baranwal	
Title of the Paper/Vol./No./ Page	Swadheenta Sangram aur Mukhticheta Nirala ka Kavya, 159-166		
Department of the Teacher	Hindi		
Name of the Journal	Hindi Anusheelan		
Year of Publication	2022		
ISSN	2249-930X		
Link of the recognition in UGC enlistment of the Journal			

29	Name of the Author	Dr. Puspa Baranwal
	Title of the Paper/Vol./No./ Page	Theth Baiswara Ka Thaath,22, 38-39, 131-136 , 159-166
	Department of the Teacher	Hindi
	Name of the Journal	Kala Vasudha (pees reviewed)
	Year of Publication	2022
	ISSN	2348-3660
	Link of the recognition in UGC enlistment of the Journal	https://www.Kalavasudha.com



30.	Name of the Author	Dr. Puspa Baranwal
	Title of the Paper/Vol./No./ Page	Swadhinta Andolan ki Virasat Aur Nagarjun, 25,4, 112-117
	Department of the Teacher	Hindi
	Name of the Journal	Sahitya Bharti (U.P. Hindi Sansthan Lucknow)
	Year of Publication	Oct.-Dec. 2022
	ISSN	2455-1309
	Link of the recognition in UGC enlistment of the Journal	

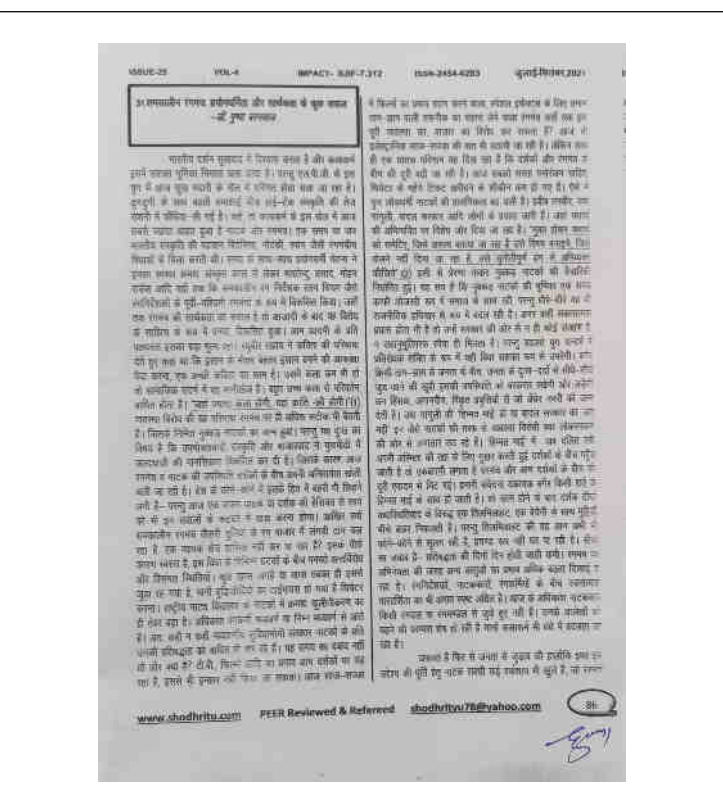


31.	Name of the Author	Sheila Srivastava	
	Title of the Paper/Vol./No./ Page	MOLECULARQUANTUM MECHANICS OF RAPID OXIDATION OF ACETAMINIPHEN BY SODIUM PERIODATE AT ALKALINE pH, 50, 1173-1180	
	Department of the Teacher	Chemistry	
	Name of the Journal	MATERIAL TODAY : PROCEEDINGS	
	Year of Publication	2022	
	ISSN	2214-7853	
	Link of the recognition in UGC enlistment of the Journal		
32	Name of the Author	Surya Prakash Verma	
	Title of the Paper/Vol./No./ Page	The Illusion of Free Will and the Prominence of Coincidence in the Films of Charlie Chaplin and Buster Keaton	
	Department of the Teacher	English	
	Name of the Journal	New Literaria	
	Year of Publication	2021	
	ISSN	25827375	
	Link of the recognition in UGC enlistment of the Journal		

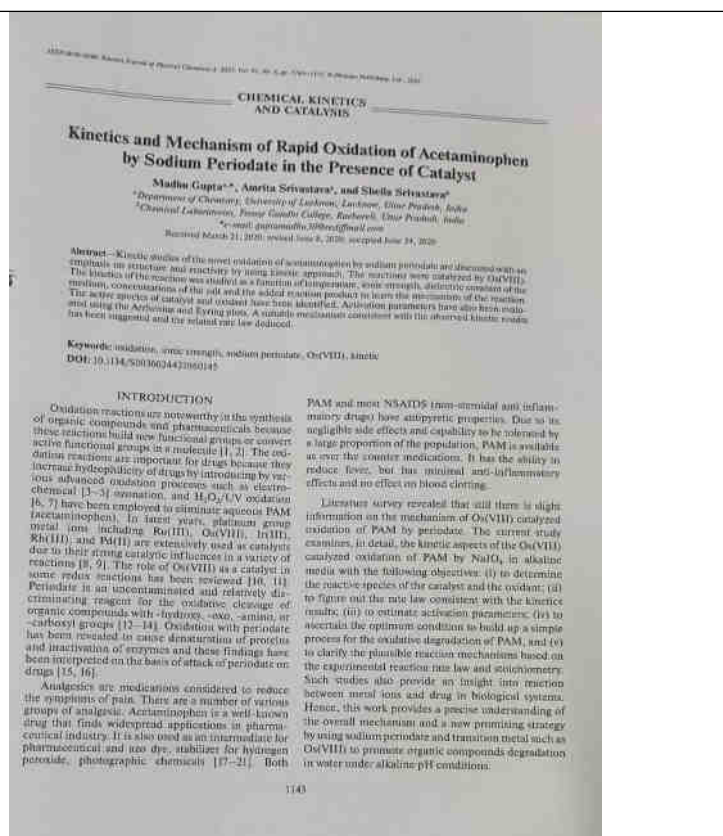
33	Name of the Author	Surya Prakash Verma	<p style="text-align: center;">The Politics of Success: Unravelling the Streaks of 'Cricket' in Aravind Adiga's <i>Selection Day</i></p> <p style="text-align: center;">Binod Mishra, Ph.D.,¹ Professor of English Surya Prakash Verma² Ph. D., Scholar Dept. of Humanities and Social Sciences Indian Institute of Technology Roorkee (Uttarakhand), India. mishra.binod@gmail.com¹ surya2145536@gmail.com²</p> <p style="text-align: center;"><i>Abstract</i></p> <p><i>Aravind Adiga's oeuvre is characterized by his satirical portrayal of the everyday realities which inform the lives of the denizens of modern Indian society. Pilloried for his depiction of India, in his own terms and the consequent trenchant criticism, Adiga's pen continues to spell the horrid realities which are otherwise encountered by everyone without realizing how these have been ingrained into our psyche. The present paper focuses on his novel, Selection Day (2016) to explore the crude reality that lies behind the glamorous game of cricket. The game that seems to have colonized the entire world is not devoid of the materialistic designs hanging like an Albatross around the necks of those who play, underplay and overplay. The paper also examines how the glitter, resulting out of the performance of players, tarnishes the psychological upbringing which stunts individual freedom and dreams.</i></p> <p>Keywords: individual freedom, malaise, human psyche, satire, game of cricket</p> <p>Aravind Adiga's entry into the world of fiction through journalism has provided him with the advantage of comprehending varied nuances of the life that assail Indian society by unravelling the undeniable truths lying behind instant fame and flights to lustrous life. His third novel, <i>Selection Day</i> (2016), with the backdrop of cricket, negotiates with several issues ranging from ambition to obsession, resulting in unknown fears affecting the lives of two promising cricketers who suffer the ignominy and anguish of all sorts. It is not the first time that Adiga tends to explore the angst and actions of the marginalised individuals. The sufferings of individuals, in the quest of achieving new Indian dream, have been one of the most prominent aspects of Adiga's <i>The White Tiger</i> (2008) also. "In this respect, Balram is a subaltern figure of satirical exaggeration, violating the normative codes of morals and ethics through his metropolitan hypocrisy, nourished by the exuberance of the 'New India'" (Detmers, 2011, 543). What distinguishes <i>Selection Day</i> from all other novels of Adiga is how the game of cricket, which "for most Indians is much more than a game" (Majumdar and Bandyopadhyay, 2004, 1450), plays a prominent role in regulating the psyche of people in general and the behaviour of players in particular. The setting of <i>Selection Day</i> happens to be in a space where everything is measured in terms of loss and gain; success and failure; fame and obscurity. Kamila Shamsie acknowledges Adiga's portrayal of an absolute materialist regime in these words: "At the end, there was only one question I wanted answered: does Manju love cricket? [...] It is always there, drowning out everything, even love" (Shamsie 2016).</p> <p style="text-align: center;">Adiga is conscious of the complexities of modern life manifest in the lust for power.</p> <p style="text-align: center;">80</p>
	Title of the Paper/Vol./No./ Page	The Politics of Success: Unravelling the Streak of Cricket in Aravind Adiga's <i>Selection Day</i>	
	Department of the Teacher	English	
	Name of the Journal	Literary Voice	
	Year of Publication	2021	
	ISSN	22774521	
	Link of the recognition in UGC enlistment of the Journal		
34.	Name of the Author	Kundan Kumar	<p style="text-align: center;">Sino-Indian Border Disputes: Issues and Challenges</p> <p style="text-align: center;">Kundan Kumar Department of Defence Studies Baiswara Degree College, Lalgunj, Raebareilly</p> <p>Abstract: The Sino-Indian border disputes have been a longstanding issue between India and China, dating back to the early 20th century. These disputes have led to several conflicts and tensions between the two countries, with both sides claiming sovereignty over certain regions along the border. The unresolved border disputes continue to be a major challenge in the bilateral relations between India and China, affecting political, economic, and security interests. This paper aims to analyze the root causes of the Sino-Indian border disputes, explore the current issues and challenges in resolving the conflicts, and suggest possible solutions for peace and stability in the region.</p> <p>Introduction: The border between India and China, known as the Line of Actual Control (LAC), has been a source of contention for over seven decades. The disputes stem from historical claims and interpretations of various agreements between the two countries, including the McMahon Line, the Simla Accord, and the Aksai Chin region. These disputes have led to several military conflicts, including the Sino-Indian War of 1962, and have strained the relations between the two countries.</p> <p>The unresolved border disputes have become a major obstacle in the bilateral relations between India and China, impacting trade, investment, and diplomatic ties. The border regions are strategically important for both countries, with valuable natural resources and strategic military advantages at stake. The ongoing tensions along the border have led to frequent standoffs and incursions by both sides, raising concerns about a potential escalation into a full-scale conflict.</p> <p>In recent years, efforts have been made to address the border disputes through diplomatic means, including boundary talks and confidence-building measures. However, these initiatives have not been successful in reaching a lasting solution, as both countries remain steadfast in their territorial claims. The challenges in resolving the Sino-Indian border disputes are complex and multifaceted, involving historical, geopolitical, and security considerations.</p> <p>This paper will delve into the root causes of the Sino-Indian border disputes, examine the current issues and challenges in resolving the conflicts, and propose recommendations for fostering peace and stability in the region. By</p>
	Title of the Paper/Vol./No./ Page	Sino-Indian Border Disputes : Issues and Challenges	
	Department of the Teacher	Defence Studies	
	Name of the Journal		
	Year of Publication	2021	
	ISSN		
	Link of the recognition in UGC enlistment of the Journal		

35.	Name of the Author	Kundan Kumar
	Title of the Paper/Vol./No./ Page	Current relations between India and Pakistan
	Department of the Teacher	Defence Studies
	Name of the Journal	security charioteer
	Year of Publication	Jan.-Jun. 2021
	ISSN	2394-3939
	Link of the recognition in UGC enlistment of the Journal	
36.	Name of the Author	Dr. B.K. Bhardwaj
	Title of the Paper/Vol./No./ Page	A study of aerobic and anaerobic training towards kho- kho women players.
	Department of the Teacher	Physical Education
	Name of the Journal	International Research Journal of human resources and social sciences
	Year of Publication	2021
	ISSN	23499-4218
	Link of the recognition in UGC enlistment of the Journal	

37.	Name of the Author	Dr. Puspa Baranwal
Title of the Paper/Vol./No./ Page	Samakaleen Rangmanch: Prayog-Sarthakta Ke Kuch Sawal,25, 4, 86-88	
Department of the Teacher	Hindi	
Name of the Journal	Shodh Rityu (peer reviewed)	
Year of Publication	2021	
ISSN	2454-6283	
Link of the recognition in UGC enlistment of the Journal	www.shodhritu.com	



38.	Name of the Author	Sheila Srivastava
Title of the Paper/Vol./No./ Page	Kinetics & Mechanism of Rapid oxidation of Acetaminophen by sodium periodate in the presence of catalyst 95(6),1143-51	
Department of the Teacher	Chemistry	
Name of the Journal	Russian Journal of Physical Chemistry A	
Year of Publication	2021	
ISSN	0036-0244	
Link of the recognition in UGC enlistment of the Journal		



39.	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	A Thermodynamic & Comparative Study of Pharmaceutical Drug (Paracetamol) by Ir(III) and Pd(II) Catalysed Oxidation in Acidic Med.: Kinetic Model”, 10(1), 22-34
	Department of the Teacher	Chemistry
	Name of the Journal	J. APPLICABLE CHEMISTRY
	Year of Publication	2021
	ISSN	2278-1862
	Link of the recognition in UGC enlistment of the Journal	
40.	Name of the Author	Dr. Puspa Baranwal
	Title of the Paper/Vol./No./ Page	Swadheenata Sangram Aur Mukti Chetna Nirala Ka Kavya., 64,2, 159-166
	Department of the Teacher	Hindi
	Name of the Journal	Hindi Anusheelay (UGC Core listed)
	Year of Publication	June 2020
	ISSN	2249-930X
	Link of the recognition in UGC enlistment of the Journal	www.bhartiyahindiparis hed.com

Available online at www.jaac.iafo

ISSN: 2278-1862

Journal of Applicable Chemistry
2021, 10 (1), 22-34
(International Peer Reviewed Journal)

A thermodynamic and Comparative Study of Pharmaceutical Drug (Paracetamol) by Ir(III) and Pd(II) Catalyzed Oxidation in Acidic Medium (HClO₄): Kinetic Model

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Accepted on 3rd January, 2021

ABSTRACT
A comparative study of Pharmaceutical drug (Paracetamol) by Ir(III) and Pd(II) catalyzed oxidation in acidic medium (HClO₄) at 35°C to 45°C. The reaction is carried out in the presence of mercuric acetate as a reagent for bromide ion. Acetone cytoluene / acetic acid was obtained as the oxidation product and identified (chromatographically). The rate law followed a first order and zero order dependence with respect to KBrO₃ and potassium chlorate respectively. The reaction followed first order with respect to Ir(III) and Pd(II) chloride. Negligible effect of [H₂O₂] and ionic strength of the medium was observed. The rate of reaction decreased with increasing [Cl⁻] was observed for the oxidation of paracetamol. Rate of reaction exhibits fractional positive order kinetics with respect to Paracetamol. The values of rate constants observed at different temperatures (35 to 45°C) were utilized to calculate the activation parameters. Quinoneimine and methyl red have been identified as main oxidation products of the reaction. Possible mechanism is proposed which are in compliance with the kinetic observations and products of the reaction. The rate law has been derived from obtained kinetic data.

Graphical Abstract


Keywords: Kinetics, Ir(III) chloride, Pd(II) chloride oxidation, Paracetamol, Potassium bromate, Acidic medium.

INTRODUCTION
The transition metal catalyzed reactions are important for the chemical industry from both practical and economic point of view. Transition metal ions are found to be good catalysts and their complexes

स्वाधीनता संग्राम और मुक्तिचेता निराला का काव्य
डॉ० पुष्पा बरनवाल

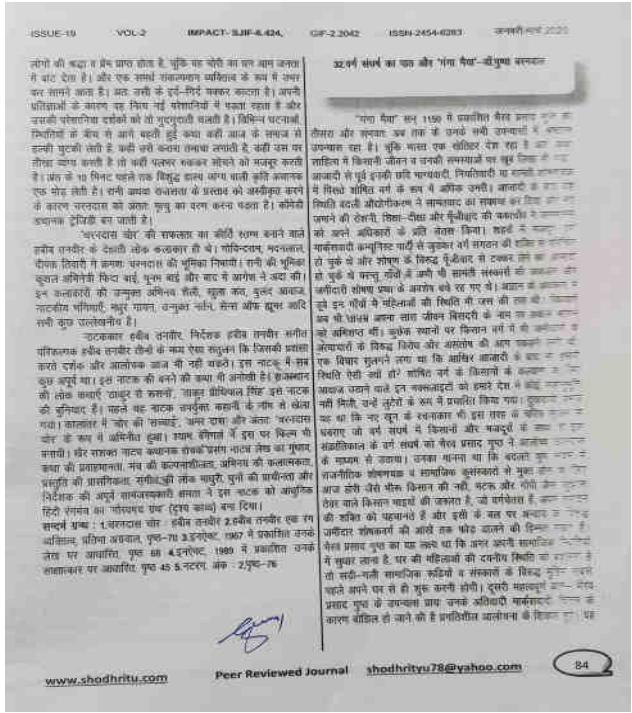
1857 का स्वाधीनता संग्राम घोषित तौर पर मले ही विफल हो गया था परन्तु इसके प्रभाव ने निरंतर भारतीय जीवन मूल्यों की विरासत को सींचते हुए उस उत्तरोत्तर गति और तेज प्रदान करने में बड़ी भूमिका निभाई। सन्मया हिन्दुस्तान आजादी की कामना में कृतसंकल्प हो उठा था। फिर भला जीवन को गति देने वाला साहित्य कैसे अमूर्त रहता। पूर्वोक्त विभाती निराला धार्यावाद युग के ही नहीं, अपितु आधुनिक हिन्दी कविता के सर्वाधिक सशक्त, सचेतक और प्रौढ़ प्रतिभा के यही कवि रहे हैं। यह संक्रातिकाल था जब एक तरफ राजनीति के क्षेत्र में गांधीवादी दर्शन और क्रांतिकारी विचारधारा चरम पर थी तो दूसरी तरफ साहित्य के क्षेत्र में छायावाद गांधीवाद दर्शन का पर्याय बनकर स्वाधीनता आन्दोलन के जीवन दस्तावेज के रूप में अपनी पैठ बना रहा था। कहना न होगा कि प्रसाद, पंत, निराला, महादेवी इन चारों कवियों में अपने समय की सबसे ज्यादा पकड़ और सूझ निराला जी में ही थी। स्वाधीनता आन्दोलन की विरासत के रूप में सर्वतोमुखी मुक्ति की कामना निराला जी ने काव्य के माध्यम से की। उनकी ध्रुव धारणा थी कि 'मुक्त काव्य कभी साहित्य के लिए अनर्थकारी नहीं होता, किन्तु उससे साहित्य में एक प्रकार की स्वाधीन चेतना फैलती है जो साहित्य के कल्याण की मूल होती है।' मुक्ति की यह महरी आकांक्षा ही कवि के आत्म विस्तार का मूल उत्स है। यह कहना निराला सही है कि निराला के प्रथम काव्य प्रयास 'जूही की कली' से लेकर 'पत्रोत्कटित जीवन का विष बुझा हुआ है' तक उनका काव्यात्मक विकास एक सुदीर्घ आत्मसंघर्ष का परिणाम है। उनका चौतरफा विद्रोह काव्य की मुक्ति की तलाश है बल्कि इसमें मनुष्य की जातीय अस्मिता उसके आत्मपीरव, त्याग, निष्ठा व कर्म की प्रतिष्ठा की भी तलाश है। निराला का लक्ष्य सिर्फ औपनिवेशिक स्वाधीनता हासिल करना नहीं था परन्तु वे समूची मानव जाति के मुक्ति प्रयास की सधना में संघर्षरत थे। यानि इनकी राष्ट्रीयता समाजिकता को केन्द्र कर बनी है। परिमल काव्य संग्रह की कविताओं में इतनी मुक्ति के बीज राष्ट्रीय चेतना की सूक्ष्म अभिव्यक्ति हुई है जो तत्कालीन रचनाकारों की कविताओं में दुर्लभ है। इसकी भूमिका लिखते समय इन्होंने कहा कि- 'मनुष्यों की मुक्ति की तरह कविता की भी मुक्ति होती है। मनुष्यों की मुक्ति कर्म के बंधन से छुटकारा पाना है और कविता की मुक्ति छंदों के शासन से अलग हो जाना है, जिस तरह मुक्त मनुष्य कभी किसी तरह दूसरों के शासन से अलग हो जाना है, जिस तरह मुक्त मनुष्य प्रसन्न करने के लिये होते हैं, फिर भी स्वतंत्र। इसी तरह कविता का भी हाल है।' कहना न होगा कि निराला ने कविता की मुक्ति को मनुष्य की मुक्ति का पर्याय घोषित

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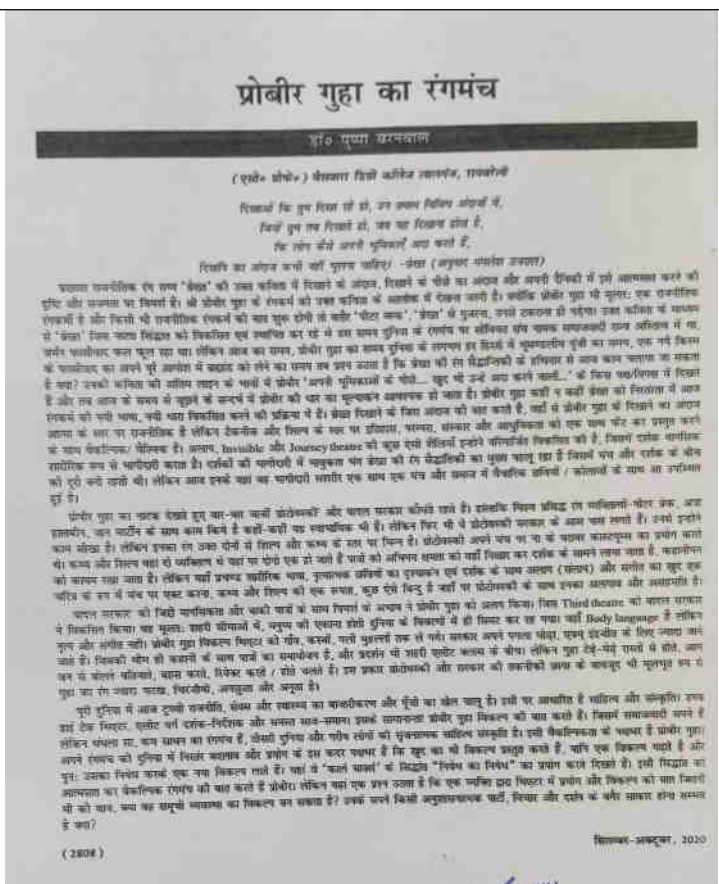
41	Name of the Author	Dr. Ramesh Chandra Yadav	<p><i>Journal of Advances and Scholarly Researches in Allied Education</i> Vol. 20, Issue No. 2, April-2023, ISSN 2230-7540</p> <h3 style="text-align: center;">Importance of the Indian Constitution's guiding principles for government policy</h3> <p style="text-align: center;">Ramesh Chandra Yadav^{1*}, Prof. Mahesh Shukla²</p> <p style="text-align: center;">¹ Research Scholar, TRS.College,APSU, Rewa, M.P. Email-ramesh47yadav@gmail.com</p> <p style="text-align: center;">² Professor, Sociology, T.R.S.College, Rewa, M.P. Email- msociology@gmail.com</p> <p>Abstract - Directive Principles have been codified as part of the Constitutional Law precisely because their scope extends beyond political democracy to include social and economic liberalism. They are put in place to serve as a "Instrument of Instructions for the Governance of the Country," with the hope that future lawmakers and administrations might learn from the precedent they create. It has a major place in the Constitution since it was crucial in guiding the State to create equitable economic and social circumstances for all Indians.</p> <p>Keywords - Directive, Principles, Constitutional, liberalism, Governance</p> <hr style="border-top: 1px dashed black;"/> <p>INTRODUCTION</p> <p>"Patience and tolerance are the best prayers." Our motto is "wipe every tear from every eye," "feed the ill-fed, half-fed, and the hungry," "clothe the naked, half-dressed, and unsheltered," and "teach the ill-literate, and the uneducated." Making radical changes to the current economic and social structure of society is necessary to end this poverty and misery and improve the conditions of the Indian masses. The preamble of our constitution, which envisions not only political but also social and economic justice for all people of the nation, echoes the lofty thoughts. However, if the democracy envisioned by the Constitution were to be limited to a political democracy, it would be difficult to realize the economic fairness guaranteed by the preamble. India grew impatient to quickly achieve economic and political equality for all of its citizens who were suffering from glaring inequities and protracted poverty, as promised in the preamble of the Indian Constitution.</p> <p>The preamble's psychological appeal stems from the emotional connotations of its terms, which include "justice," "liberty," "equality," and "fraternity." The preamble of the Constitution has been referred to as its most gracious section, its heart and soul, its fulcrum, and its philosophy. It is also a magnificent prose poem. The preamble is expanded upon and made clearer throughout the whole Indian Constitution.</p> <p>The Constituent Assembly's members bore enormous responsibility for drafting a new Constitution that would be able to endure the pressure of the native socio-economic conditions while also demonstrating its resilience and viability. Therefore, the Constitution's goals ought to take into account the measures for ensuring the people's basic means of subsistence and advancement. Freedom, according to Nehru, is a means to the social evolution of humanity, it is not an end in itself. It is clear from the socioeconomic revolution, which served as the basic tenet of the Constituent Assembly that political independence should be used as a tool to attain this goal. Nehru warned the Constituent Assembly that if this issue wasn't resolved right away, all of our constitutions will become meaningless and without meaning. The members of the Constituent Assembly had only Gandhian and Euro-American models left after rejecting the Soviet Communist model. Despite the fact that Gandhi was never involved in the Constituent Assembly or the Constitution-writing process, Gandhian tradition was represented in a minor way throughout the Constituent Assembly's discussions. The Congress leadership was adamant that the Congress 3 Party needed to be strengthened in order to further social progress and national cohesion.</p> <p style="text-align: center;">THE IDEA OF DIRECTIVE PRINCIPLES</p> <p>The question of what the concept of directive principles is and how and why it is included into the Indian Constitution is one that immediately pops up. The Advisory Committee developed the concept of Directive principles first, and it was incorporated into</p> <p style="text-align: right;">www.ignited.in</p> <p style="text-align: right;">142</p>
42	Name of the Author	Surya Prakash Verma	<p><i>Original Article</i></p> <p style="text-align: right;">Contemporary Values of Date: 1-12 © The Author(s) 2023 Article reuse guidelines: in.sagepub.com/journals-permissions.india DOI: 10.1177/22307540231187767 journals.sagepub.com/home/voe</p> <p style="text-align: right;"></p> <h3 style="text-align: center;">Untouchables in Love: An Investigation of Rebellion Against Casteism in Nagraj Manjule's Select Features</h3> <p style="text-align: center;">Surya Prakash Verma¹ and Binod Mishra²</p> <p>Abstract</p> <p>The present article aims at analysing the revolutionary function of love in Marathi filmmaker Nagraj Manjule's (b. 1978) selected feature films. The first two of Manjule's feature films are set in a society mired in the vicious circle of the caste system. <i>Fandry</i> (2013) portrays the one-sided love story of a boy, and <i>Sarot</i> (2016) is based on the heart-rending story of Honour Killing in a realized love relationship between a lower-caste boy and an upper-caste girl. In contemporary India, the unprivileged people, whom the four-tier caste system addresses as untouchable, have been conditioned to eat, wear, work, and form human relationships in a particular manner that serves the purpose of casteism. The article will further explore how falling in love works as a constructive vehicle to carry forward the rebellion of both the protagonists against the inhuman norms of the destructive system. To discuss the nature of love in the films under discussion, the article takes the philosophical background from <i>In Praise of Love</i> (2009) by Alain Badiou, and <i>The Radicality of Love</i> (2015) by Srecko Horvat. At the same time, it takes its arguments against casteism from the ideas of Jyotirao Govindrao Phule (1827-1890), Babasaheb Bhimrao Ambedkar (1891-1956), and other like thinkers in this line.</p> <p>Keywords: Anti-caste cinema, casteism, love, Marathi cinema, Nagraj Manjule, rebellion</p> <p>Life and Time of Nagraj Manjule</p> <p>India is a country that is based in caste and class discriminations. Caste is primarily decided by economic factors—dynamic in nature which an individual can change by applying external efforts. On the contrary, caste is a social factor which is decided by one's birth and unlikely to alter. In India, if one is born poor, they can overcome it by becoming rich but the condemnation of being born as an untouchable cannot be altered in a lifetime. Nagraj Manjule (b.1978), through his films, addresses the problems that the people from unprivileged castes face in India.</p> <p><small>¹Department of English, Baswara Degree College, Raibareilly, Uttar Pradesh, India ²Department of Humanities and Social Sciences, Indian Institute of Technology (Roorkee), Roorkee, Uttarakhand, India</small></p> <p>Corresponding author: Surya Prakash Verma, Department of English, Baswara Degree College, Lalganj, Raibareilly, Uttar Pradesh 229206, India. Email: surya2145336@gmail.com</p>

43.	Name of the Author	Diksha Mishra	<p style="text-align: right;">Social Science Spectrum Vol. 6, No. 2, Apr. 2020 pp. 74-87</p> <p style="text-align: right;">ISSN 2454-2806</p> <p style="text-align: center;">Regional Variations in Child Malnutrition in Uttar Pradesh</p> <p style="text-align: center;">Diksha Mishra*, Kunal Keshri** & Abhishek Gupta***</p> <p style="text-align: center;">Abstract</p> <p>Malnutrition is a major health concern in most developing countries in children aged less than 5 years. Child malnutrition is generally considered as a condition of child being undernourished or underweight or overweight. As Uttar Pradesh (UP) has the largest proportion of the country's malnourished children, the study of child malnutrition in India and none has been done in UP. In this study, we analyse the regional variation in Uttar Pradesh with respect to child malnutrition and examine the determinants of child malnutrition. Economic inequality, female illiteracy, place of residence and maternal education, social structure of the society (social groups, religion and sex of child), source of drinking water and toilet facility are directly connected with the health of children. Using Multivariate Logistic Regression analysis on the data of NFHS-4, the paper examines the regional variation of child malnutrition in Uttar Pradesh. The research picture is that the intra-state regional variation of child malnutrition is present in Uttar Pradesh. The position of stunting and being underweight is very high in the southern region. The eastern region is the second most over-nourished area for child health. Maternal education has been found to be negatively associated with child malnutrition. Thus, there is a need to plan a greater focus on female literacy which is low in Uttar Pradesh.</p> <p>Keywords: Child malnutrition, regional variation, climate, health, Uttar Pradesh, NFHS-4</p> <p>1. Introduction</p> <p>Good health and well-being is the third and foremost goal of the 17 global Sustainable Development Goals (SDGs) set by the United Nations Development Programme (UNDP). Covid pandemic has shown the world again that health issues are still the main hurdle for the world for attaining SDGs by 2030. The SDGs recognize that health and development are intimately connected (UNDP, 2017). Malnutrition is a major health concern in most of the developing countries in children aged less than five years. According to the World Health Organization (WHO), malnutrition is responsible for more than half of child deaths globally. The burden of malnourished children in India is amongst the highest in the world: nearly 60 million Indian children are estimated to be underweight, more than 50 per cent suffer from anaemia and a similar proportion lacks full immunization (Deaton & Dreze, 2009). India accounts for approximately one-third of the world's total population of stunted children under the age of 5 years (Global Nutrition Report, 2018). India comprises of almost 13 per cent of the child population aged 0-4 years (Census, 2011) and 38 per cent of children suffer from chronic under-nutrition (NFHS, 2017). As Uttar Pradesh (UP) has the largest proportion of the country's child malnutrition, the study is relevant.</p> <p>The term malnutrition covers two broad groups of conditions. The first one is 'undernutrition' while the other is 'over-weight' or 'over-nutrition'. Undernutrition includes stunting (low height-for-age), wasting (low weight-for-height), underweight (low weight-for-age) and micronutrient</p> <p>* Diksha Mishra, Assistant Professor, Department of Geography, Banarsidas Dutt College, Barabanki 229206, Uttar Pradesh, India. Email: misha.diksha994@gmail.com</p> <p>** Kunal Keshri, Assistant Professor, Department of Migration and Urban Studies, International Institute for Population Sciences, Gurgaon Station Road, Gurgaon, Haryana-122001, India. Email: keshri.kunal@iips.ac.in (Corresponding author)</p> <p>*** Abhishek Gupta, Research Scholar, International Institute for Population Sciences, Gurgaon Station Road, Gurgaon, Haryana-122001, India. Email: abhishek.gupta.iips@iips.ac.in</p> <p>Acknowledgement: The authors would like to acknowledge Dr. Kanti Gaur (Manager, M & L, Sakam Buzbay Foundation, Mumbai) for providing valuable comments towards improving the paper.</p>
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	Year of Publication	2020	
	ISSN	2454-2806	
	Link of the recognition in UGC enlistment of the Journal		
44.	Name of the Author	Dr. Puspa Baranwal	सैद्धांतिकी
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	Department of the Teacher	Hindi	
	Name of the Journal	Saiddhantiki	
	Year of Publication	2020	
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	Link of the recognition in UGC enlistment of the Journal		

45	Name of the Author	Dr. Puspa Baranwal
	Title of the Paper/Vol./No./ Page	Varg Songharsh Ka Path Aur Ganga Maiya, 19, 2, 84-86
	Department of the Teacher	Hindi
	Name of the Journal	Shodh Rityu (peer reviewed)
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	ISSN	2454-6283
	Link of the recognition in UGC enlistment of the Journal	www.shodhritu.com
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	Department of the Teacher	Hindi
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	Year of Publication	2020
	ISSN	2454-6283
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47	Name of the Author	Dr. Puspa Baranwal
	Title of the Paper/Vol./No./ Page	Probir Guha ka Rangmanch, 12,5, 2808-09
	Department of the Teacher	Hindi
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	Year of Publication	2020
	ISSN	0975-119X
	Link of the recognition in UGC enlistment of the Journal	www.ugc-code-drishtikon.com
48	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Sodium Periodate as a Selective Oxidant for Diclofenac Sodium in Alk. Med.:A Quantum Chemical Approach, 15 (2), 545-560
	Department of the Teacher	Chemistry
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	Year of Publication	2020
	ISSN	1978-2993
	Link of the recognition in UGC enlistment of the Journal	



	Name of the Author	Sheila Srivastava
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	Department of the Teacher	Chemistry
	Name of the Journal	Bulletin of Chemical Reaction Engineering & Catalysis
	Year of Publication	2020
	ISSN	1978-2993
	Link of the recognition in UGC enlistment of the Journal	

49	Name of the Author	Dr. Praveen Singh
	Title of the Paper/Vol./No./ Page	The Kargil War : Strategic Importance and its origin, 6(7), 115
	Department of the Teacher	Defense Studies
	Name of the Journal	Global Journal of Engineering, Science and Social Sciences Studies
	Year of Publication	2020
	ISSN	2394-3084
	Link of the recognition in UGC enlistment of the Journal	

Global Journal of Engineering, Science & Social Science Studies Available online at www.gjess.edwin.co.in
Volume 06, Issue 07, July 2020 ISSN- 2394-3084

THE KARGILWAR: STRATEGIC IMPORTANCE & ITS ORIGIN
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Abstract

Kargil, a silent valley in the lap of Rocky Mountains has been making headlines during all the Indo Pak skirmishes since Partition. One known for polo, archery and a variety of district folk dances, this entire area has since turned into a battlefield with hundreds of Pakistani shells wreaking havoc every day.
Key Words: Kargil, silent Pakistani shells wreaking havoc

Introduction: Running along most of this portion of the LoC is the Srinagar-Leh National Highway, open to vehicular traffic for about five months of the year from June to October. The LoC runs as close as 04 to 12 Km from the highway. Before, the incursions began, the Pakistanis only had a few windows, through which they could visually spot short stretches (about 100 to 300 metres) of the highway. These served as observation posts to direct Pakistani artillery fire from positions located behind the ridges. But since Pakistan did not have any gun position directly overlooking the road, the traffic flow remained relatively unaffected. Thus, any encroachment in the Drass-mushkot-Kargil-Kakkar sector would enable the Pakistanis to dominate, interdict or even render this highway in a state of disuse. Across the LoC opposite Drass in Pakistan occupied Kashmir (POK) is Galtari where Pakistan has an advance landing ground for short take-off and landing (STOL) aircraft. From Galtari and Drass, two sets of roads run to the LoC, which means that gains in the Drass sector can link these two roads, thereby bringing the Pakistanis much closer to the highway. Similarly, there is a road each running from Skardu (the location of a Pakistani brigade headquarters and an air base) and Chitwatang (in POK) towards Kargil. Thus, incursions in this sector again brings them closer to interdicting the National Highway. The implications of such a situation would be simply disastrous. Depending on the extent of the incursion, the army's efforts to stock its garrisons at Kargil and Leh would be severely hampered and might even get completely cut off. A minimum fallback could severely restrict free flow of traffic, which means it will take much longer than the current two days for the convoys to travel between Srinagar and Leh. A complete cut-off would mean employing the long and arduous Pathankot-Manali-Bura Lachula road to Leh.

The Origin of Kargil war:- Sometime after the Shimla Agreement of July 1972, Pakistan realized it would be no longer possible for Pakistan to recover all of Jammu and Kashmir from India and it started on a different track, without formally restating its stand. It appears that, at that stage, Pakistan decided to concentrate on absorbing Muslim Majority areas of Jammu and Kashmir and enlarging them with a view to making them strategically more secure and free of impurities.

Pakistan decided to move to the two opposite ends of the spectrum of warfare, reserving its conventional forces for defence of Pakistan against aggression by India using similar forces. It decided to resort to insurgency at one end, and started working on its nuclear option, with greater seriousness at the other. It also seriously started considering, or so it seems, the possibility of having to give up claims on the Jammu and Ladakh region. This line of thinking is reflected in an inverted manner in the writing of General Mirza Aslam Beg, former Chief of the Pakistan Army. He talks of 'Halkationisation of Kashmir' by India, and creation of autonomous regions of Ladakh. He writes: "As a first step, the area of Ladakh has been given autonomy. The district, however, comprising a Muslim majority area Kargil, has been retained within the jurisdiction of the Indian held Kashmir". These developments have been mentioned by General Beg admittedly in a pejorative sense; the conclusions that can be drawn from what General Beg has to say, are entirely his own. These conclusions, undoubtedly, will be denied by General Beg. As and when an opportunity arises for Pakistan to make a diplomatic bid for Muslim majority areas of Jammu and Kashmir, a ring of territory around the valley which is occupied by tribesmen distinct from Kashmirans, would be of help to Pakistan in putting down the movement for an independent Kashmir. This is one of the added strategic advantages that Pakistan seeks from the occupation of areas in Kargil sector. Ever since the late President Zia-ul-Haq launched 'Operation TOPMAC' in the late eighties, insurgency in Jammu and Kashmir under Indian control has been inspired and fuelled by Pakistan. Insurgents have been systematically trained, supported and armed by Pakistan, and advised to carry out operations that fit into the overall strategy conceived by it. But native insurgents, as is well known, tend to be functions and are likely to pursue their own agendas and / or private interest. Pak strategy has a concealed element for dealing with a contingency in which Pak-trained Kashmiri insurgents start resisting Pak domination. They have an undoubted place in the low or no cost option that Pakistan has in its repertoire, but, in any case, insurgency by itself does not seem to have achieved the results that were expected of it. Tensions seem to be returning to the Kashmir valley, cinema houses have started screening films, and satellite television aerials have appeared on rooftops. Pakistan interprets these gradual changes as an

50	Name of the Author	Dr. Praveen Singh
	Title of the Paper/Vol./No./ Page	Baluchista mei Algaav-vadi andolan: Muddey Aur Vivaad, 09(3), 84
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	Name of the Journal	Global Journal of Multidisciplinary Studies
	Year of Publication	2020
	ISSN	2348-0459
	Link of the recognition in UGC enlistment of the Journal	

Global Journal of Multidisciplinary Studies Available online at www.gjms.edwin.co.in
Volume 09, Issue 03, February 2020 ISSN- 2348-0459

बलुचिस्तान में अलगाववादी आन्दोलन - मुद्दे एवं विवाद
प्रवीण सिंग
 सहायक प्राध्यापक एवं नवोदयिक अध्ययन विभाग इलाहाबाद विश्वविद्यालय, इलाहाबाद

सारांश

बलुचिस्तान, पाकिस्तान के दृष्टिकोण से अलगाववादी आन्दोलन का प्रमुख क्षेत्र है। यह आन्दोलन 1973 में शुरू हुआ था। बलुचिस्तान 25,000 वर्ग किलोमीटर का एक क्षेत्र है। जो पाकिस्तान के कुल क्षेत्रफल का 43 प्रतिशत भाग है। इस आन्दोलन में अलग-अलग आन्दोलनकारी नेताओं ने अलग-अलग आन्दोलनों का नेतृत्व किया है।

परिचय - बलुचिस्तान, पाकिस्तान का एक प्रांत है। यह अलग-अलग आन्दोलनकारी नेताओं द्वारा शुरू किया गया है। यह आन्दोलन 1973 में शुरू हुआ था। बलुचिस्तान 25,000 वर्ग किलोमीटर का एक क्षेत्र है। जो पाकिस्तान के कुल क्षेत्रफल का 43 प्रतिशत भाग है। इस आन्दोलन में अलग-अलग आन्दोलनकारी नेताओं ने अलग-अलग आन्दोलनों का नेतृत्व किया है।

परिचय - बलुचिस्तान, पाकिस्तान का एक प्रांत है। यह अलग-अलग आन्दोलनकारी नेताओं द्वारा शुरू किया गया है। यह आन्दोलन 1973 में शुरू हुआ था। बलुचिस्तान 25,000 वर्ग किलोमीटर का एक क्षेत्र है। जो पाकिस्तान के कुल क्षेत्रफल का 43 प्रतिशत भाग है। इस आन्दोलन में अलग-अलग आन्दोलनकारी नेताओं ने अलग-अलग आन्दोलनों का नेतृत्व किया है।

51.	Name of the Author	Dr. Praveen Singh
	Title of the Paper/Vol./No./ Page	Global approaches on 1971 India-Pakistan War, 04(12), 86
	Department of the Teacher	Defense Studies
	Name of the Journal	International Journal of Management , law and Sciences Studies
	Year of Publication	2020
	ISSN	2456-4303
	Link of the recognition in UGC enlistment of the Journal	
52	Name of the Author	Dr. Surya Kumar Mishra
	Title of the Paper/Vol./No./ Page	Impact of globalization on Kashinath Singh's novel Rehan Par Raghu, vol. 6, no. 2.1, 117-118
	Department of the Teacher	Hindi
	Name of the Journal	Interdisciplinary Journal Contempory Research
	Year of Publication	2019
	ISSN	23938358
	Link of the recognition in UGC enlistment of the Journal	

ISSN:2456-4303 <http://journalsinternational.co.in/index.php/IJMSS/user>
International Journal of Management, Law & Science Studies, IJMSS
 VOL 04, ISSUE 12, August 2020 Impact factor:3.273

GLOBAL APPROACHES ON 1971 INDIA - PAKISTAN WAR
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Abstract

Pre 1971 Pakistan was a geographical incongruity with its two halves 1200 miles apart, having little in common except Islam. The language, culture, economic and other disparities made the two wings of Pakistan different nations. Immediately after the creation of Pakistan the West Pakistani ruling clique planned economic and political domination of East. Within twenty years of the creation of Pakistan the per-capita income of West 61% higher than the East, although illiteracy in East Pakistan was 17.6% as compared to 13.6% in West Pakistan. Further, the export-earnings by East Pakistan's products were between 50 and 70% while her share in foreign imports never exceeded 30%. The percentage of Bengalis in the powerful civil service was close to 2% while in the armed forces it was less than 10%. Since 1951 Pakistan has been a major recipient of U.S. Economics and Military Aid. She was an early member of SEATO and CENTO. The bulk of assistant received was utilized to build and maintain the super-structure of the armed forces and to support industrialization of West Pakistan with only a handful of projects undertaken in the East Wing. It is interesting to quote here a Washington Post Correspondent who at one time reported that apart from the brief border war with India in 1965 "the only active use of the sophisticated weapons supplied by U.S.A. has occurred against the unarmed and defenceless civilian population of East Pakistan".

Key words :- Pakistan Economics income percentage.

Introduction:- The history of economic and political domination of East Pakistan by the West naturally led to increasing demands for provincial autonomy spearheaded by Sheikh Mujiburrahman of Awami League. In West Pakistan a continued agitation against Ayub Khan and reached a high pitch in 1969, and the army had come to consider Ayub Khan to be an embarrassing liability. To them he was more a political than a military leader who after Tashkent was more interested in his political survival than military strength. One March 25, 1970 Ayub resigned and crowned General Mohd. Yahya Khan with his legal responsibilities. The martial law regime of General Yahya Khan proved to be weak. However, the new regime announced that the country will soon be returned to the parliamentarians, Yahya opened dialogue with various political parties and announced on November 28, 1969 that nationwide elections for the National Assembly will be held on the basis of adult universal franchise to frame a new constitution and the eventual transfer of power to people. The credible assessment of the U.S. secretary of State Henry Kissinger in the early stage of the crisis that the "military crackdown on the Bangladesh on March 25 internationalized the one time internal issue of Pakistan and the dismemberment of Pakistan was inevitable as the Bangladesh would no longer accept the West Pakistan colonial rule made no difference in the U.S. policy towards Pakistan. Kissinger admits "that inspire of U.S. public and press criticism of our policy" the U.S. administration felt deeply obliged to support her "trustworthy ally" Pakistan for establishing a link between China and the U.S. through quiet diplomacy. Although Kissinger repeatedly talks of the biased reporting of the Pakistan crisis by the U.S. bureaucracy and also mentions an instance when the bureaucracy speeded up the supply of military hardware of Pakistan much to his discomfort but the official U.S. police to support Yahya's military regime and condemnation of India's role in the crisis remained unchanged. The message to Pakistan President by the Chinese Premier through the U.S. Secretary of State that 'China would back whatever Pakistan wanted' was no less significant. In this background it was very natural for Pakistan to feel convinced of U.S. Chinese support in their hour of crisis. The policy of Soviet Union in the initial stages of the East Pakistan happenings was of extreme caution. The Soviets believed that the crisis will be solved internally. India was advised not to involve herself in the crisis beyond a

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 ISSN:2393-8358
 Volume 6, No. 2.1, February 2019
 Impact Factor: 3.273

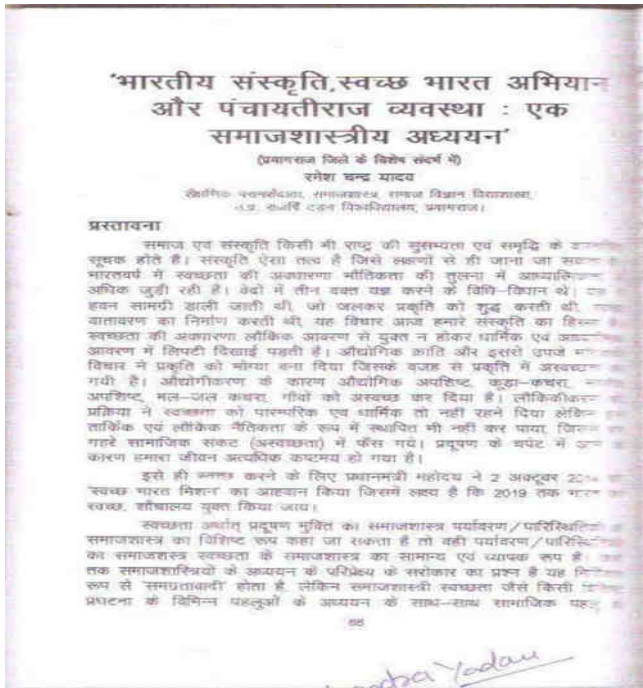
काशीनाथ सिंह के उपन्यास 'रेहन पर राघु' पर भूमण्डलीकरण का प्रभाव

सूर्य कुमार मिश्रा
 डॉ. एम. ए., हिन्दी विभाग, इलाहाबाद विश्वविद्यालय, इलाहाबाद

भूमण्डलीकरण का प्रभाव के अर्थ, वैश्विक परिवर्तन में काशीनाथ सिंह के उपन्यास 'रेहन पर राघु' का विश्लेषण है। इसी नाम के उपन्यास में काशीनाथ सिंह ने एक युवा की कहानी लिखी है जो अपने परिवार के साथ भारत में रहता है। इस उपन्यास में काशीनाथ सिंह ने वैश्वीकरण के प्रभावों को दिखाया है। इस उपन्यास में काशीनाथ सिंह ने वैश्वीकरण के प्रभावों को दिखाया है। इस उपन्यास में काशीनाथ सिंह ने वैश्वीकरण के प्रभावों को दिखाया है।

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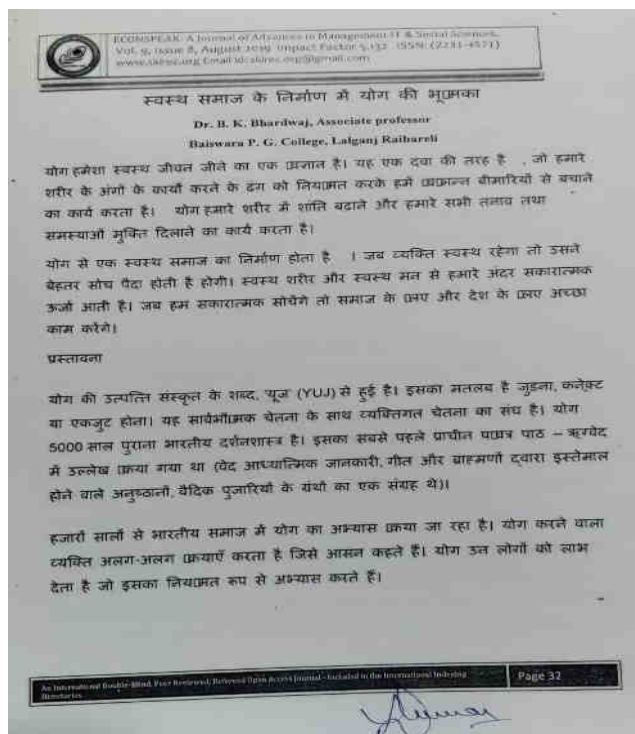
55	Name of the Author	Ramesh Chandra Yadav	<p style="text-align: center;">संस्कृति एवं राष्ट्रवाद सम्बन्धी पं. दीनदयाल उपाध्याय के विचारों का एक समाज वैज्ञानिक अध्ययन</p> <p style="text-align: right;"><i>रमेश चन्द्र यादव *</i></p> <p>पं. दीनदयाल उपाध्याय एक भारतीय विचारक अर्थशास्त्री, समाजशास्त्री, इतिहासकार और राजकार थे। उन्होंने राष्ट्रीय स्वयंसेवक संघ के निर्माण में महत्वपूर्ण भूमिका निभाई और भारतीय जनता के अग्रणी भी बने इन्होंने ब्रिटिश शासन के दौरान भारत द्वारा पश्चिमी धर्मनिरपेक्षता और पश्चिमी लोकतंत्र का आँख मंद कर सम्बर्धन का विरोध किया। यद्यपि उन्होंने लोकतंत्र की अकारणता को सरलता से स्वीकार कर लिया लेकिन पश्चिमी कुलीनता शोषण और पूँजीवादी मान्यता से साफ़ इनकार कर दिया था। इन्होंने अपना जीवन लोकतंत्र को शक्तिशाली बनाने और जनता की बातों को आगे रखने में जगा दिया।</p> <p>दीनदयाल उपाध्याय की अकारणता थी कि आजादी के बाद भारत का विकास का आधार अपनी भारतीय संस्कृति हो न की अंग्रेजों द्वारा छोड़ी गयी पश्चिमी विद्याधारा हालांकि भारत में लोकतंत्र आजादी के तुरन्त बाद स्थापित कर दिया गया था परन्तु दीनदयाल उपाध्याय के मन में यह आशाका थी कि लम्बे वर्षों की मुलामी के बाद भारत ऐसा नहीं कर पायेगा। उनका विचार था कि प्रत्येक व्यक्ति का सम्मान करना प्रशासन का कर्तव्य होना चाहिए। उनके अनुसार लोकतंत्र अपनी सीमाओं से परे नहीं जाना चाहिए और जनता की राय उनके विद्यास और धर्म के आलाक में सुनिश्चित करना चाहिए।</p> <p>पं. दीनदयाल उपाध्याय वैदिक परम्परा और मानव जीवन के उदात्त मूल्यों को राष्ट्र की रचना में प्रयुक्त करने के लिए सतत सन्मद्ध रहे। उनकी स्पष्ट मान्यता थी कि सांस्कृतिक परिवेश एक राष्ट्र को महत्ता प्रदान करने का प्रबल अवलम्ब है। वह व्यक्ति, समाज, राष्ट्र और सृष्टि के तादात्म्य में विकास करते थे। उनके चिन्तन में ऐसी मौलिकता एवं बोधगम्यता है जो भारतीय इतिहास, परम्परा, राजनीति और भारतीय अर्थनीति से प्रस्फुटित है तथा आधुनिक स्थितियों एवं आवश्यकताओं की पूर्ति करने में समर्थ दिशाओं का निर्देशन करती है। उपाध्याय जी की चिन्तन का प्रेरणा किन्दु भारत का यह निर्धन अनिकेत एवं रूढ़ियों से अस्मर्ध अन्तिम व्यक्ति है जिसने काल और हर प्रकार के भयों को मर्य भारत के स्व और स्वाभिमान को अपने निर्निर्ण, दुर्बल, शोषित शरीर में जीवित रखा है। उपाध्याय जी की यह धारणा थी कि इस दरिद्रनारायण को सामाजिक, आर्थिक, शैक्षणिक एवं मनोभाविय रिक्तताओं की पूर्ति कर उसके आधुनिक परिस्थितियों में 'नर' से नारायण के भयबोध से परिचित कराने ही देश का कल्याण एवं गौरव निहित होगा। इसी विश्वास को मूल रूप प्रदान करने हेतु उन्होंने जीवन पर्यन्त साधर्म किया और अपना सर्वस्व न्यायोचक्र कर दिया।</p> <p>श्री अटल बिहारी वाजपेयी की सृष्टि में 'राजनीति उनके लिए साधन थी, साध्य नहीं। यह मार्ग था मजिल नहीं। वे राजनीति का आध्यात्मिकरण चाहते थे। वे भारत के उज्वल अतीत से प्रेरणा लेते थे तथा उज्वलतर भविष्य का निर्माण करना चाहते थे। उनकी मान्यताएँ सदियों पुराने आर्य राष्ट्र जीवन की जड़ों से रस ग्रहण करती थी किन्तु वे कृत्रिम नहीं थीं। भविष्य के निर्माण के लिए वे भारत को समुद्रिशासी आधुनिक राष्ट्र बनाने की कल्पना लेकर बसे थे। उपाध्याय जी का कार्य अविनिच्छ नहीं; तत्पनिष्ठ था। उन्होंने सदैव आदर्शों पर बल दिया और निम्नोक्त के लिए जीना सीखाया।' यह एक महामनीषी थे, जो सामग्री मानवता को सुखी, सम्पन्न बनाने के लिए अल्पकाल विनाशुर रहे युग युगों की तरह ही वे अपने शरीर का कण-कण और जीवन का कण-कण राष्ट्र सेवा के चरणों में समर्पित कर भारती पर समानता, समरसता, कनेतता, ज्ञानवता, सर्वसम्पन्नता, सुख और शक्ति की सन्तजाहकी उत्तराने के लिए अविश्रित समीर्य प्रयत्न करते रहे।'</p> <p style="font-size: small;">* वैशेषिक परामर्शदाता-सम्बन्धनायक, सन्तद, विमान विद्यालय, उ.प्र. राजकी टंकन विश्वविद्यालय, प्रयागराज</p>
Title of the Paper/Vol./No./ Page	"Sanskriti Evam Rastravad Sambandhi Pt. Deen Dyal Upadhyay Ke Vicharon ka Ek Samaj Vaigyanik Aadhyan."Page No. 252-256		
Department of the Teacher	Sociology		
Name of the Journal	Sodha Pravaha(A Multidisciplinary Refereed Research Journal March, 2018)		
Year of Publication	2019		
ISSN	2231-4113		
Link of the recognition in UGC enlistment of the Journal			
56	Name of the Author	Ramesh Chandra Yadav	<p style="text-align: center;">Significance and Role of Symbols in Indian Culture : A Sociological Perspective</p> <p style="text-align: right;"><i>Ramesh Chandra Yadav*</i></p> <p>Introduction : There are many symbols which portrays Indian culture. Each symbols in a brand or a document has got a particular significance and a history attached to it. Symbols are the basis of culture. A symbol is an object, word or action that refers to something else with no natural relationship that is culturally defined. Ever thing one does through out their life is based and organised through cultural symbolism. Before man learned about words and letters, he used different drawings and pictures to communicate stories and narrative to other people. Through the years, people all over the world have used to symbols to mean various things. They have become an easy way to point out an ideology, to express an abstract thought or even to denote a group or community who share the same goals.</p> <p>Charactersties of Symbol : The English word 'Symbol' owes its origin to the Greek word 'Symbolon' meaning 'a sign' by which one knows or infers a thing. Human use symbols so much so that it has become an innate tendency in them.</p> <p>Some main characteristics of symbolism can be expressed in:</p> <ol style="list-style-type: none"> 1. Symbolism is understood as well as believed. 2. It holds a coprehensive view and carries the value of whole. 3. Symbol translate the complex to simple. 4. It is to frontless to front. 5. It unveils from mysterious to understanding. <p>The interplay of remotely manipulated reckless market forces both of the world and the underworld generating lots of corruption and crime, prosperity and poverty and driven by constructive-cum-destructive activities called development, urbanization, industrialization, mass production tending to impose nearly absolute technological control minimising human labour and unleashing unmitigated pollution inretrievably damaging the environment have been largely successful in bringing about crony statism instead of crony capitalism. The question asked to the theme of the present Paper by this troubled world is whether Indian Art and Culture as</p> <p style="font-size: small;">* Academic Consultant-Sociology, School of Social Science, UPRTOU, Prayagraj</p>
Title of the Paper/Vol./No./ Page	"Significance and role of Symbols in Indian Culture: A Sociological Perspective". Page No. 474-481		
Department of the Teacher	Sociology		
Name of the Journal	Jigyasa(An Interdisciplinary Refereed Research Journal May, 2019)		
Year of Publication	2019		
ISSN	0974-7648		
Link of the recognition in UGC enlistment of the Journal			

57.	Name of the Author	Ramesh Chandra Yadav	<p style="text-align: center;">Technology as an Instrument of Social Change in Distance Education: An Overview</p> <p style="text-align: right;"><i>Ramesh Chandra Yadav*</i></p> <p>Introduction : This conceptual paper presents the position that the primary changes in human history are the four social revolutions (domestication, agriculture, industrialization, and information), the change from Gemeinschaft to Gesellschaft types of societies, capitalism and industrialization, modernization and global stratification. Ethnic conflicts and social movements indicate cutting edges of social change. Sociological approaches such as William Ogburn's theory of social change, which asserts that technology is the basic cause of social change are fully explored and applied in this discourse.</p> <p>Discussions of social change among sociologists often begin with complaints or accusations about the lack of uniformity concerning its definition. The point is well taken, for practically every book on social change has a section on definitions conditioned by the author's theoretical orientation, in an attempt to narrow the concept down. There is a multiplicity of such ventures with few features in common. Perhaps Thurman Arnold was correct, four decades ago, in suggesting that a definition is ordinarily supposed to produce clarity in thinking.</p> <p>The genesis and development of social change: the four social revolutions : The rapid far-reaching social change that the world is currently experiencing did not just happen. Rather it is the result of fundamental forces set in motion thousands of years ago, beginning with the gradual domestication of plants and animals. This first social revolution allowed hunting and gathering societies to develop into horticultural and pastoral societies. The plow brought about the second social revolution, from which agricultural societies emerged. Then the invention of the steam engine ushered in the industrial revolution. And now we are witnessing the fourth social revolution, stimulated by the invention of the microchip. The thrust of this article is that our lives are being vitally affected by this fourth revolution and so far we have seen only the tip of the iceberg. By the time this social revolution is full blown, little of our way of life will be left.</p> <p style="text-align: right;"><small>* Academic Consultant- Sociology, School of Social Science, UPRTOU Prayagraj.</small></p>
	Title of the Paper/Vol./No./ Page	"Technology as an Instrument of social change in distance Education: An Overview" Page No. 432-438	
	Department of the Teacher	Sociology	
	Name of the Journal	Jigyasa (An Interdisciplinary Refereed Research Journal Feb,2019)	
	Year of Publication	2019	
	ISSN	0974-7648	
	Link of the recognition in UGC enlistment of the Journal		
58	Name of the Author	Ramesh Chandra Yadav	
	Title of the Paper/Vol./No./ Page	"The Role of panchayati raj as a instrument of Social Transformation: A Sociological Study" Page No. 275-285	
	Department of the Teacher	Sociology	
	Name of the Journal	Swachha Bharat Abhiyan Aur Panchayatiraj vyavastha	
	Year of Publication	2019	
	ISSN	978-81-941370-1-6	
	Link of the recognition in UGC enlistment of the Journal		

59	Name of the Author	Dr. Ajay Kumar Sinha
	Name of the Author	Role of human rights in the context of national security and terrorism
	Title of the Paper/Vol./No./ Page	
	Department of the Teacher	Defence Studies
	Name of the Journal	Journal of Research Though
	Year of Publication	2019
	ISSN	2229-7995
	Link of the recognition in UGC enlistment of the Journal	



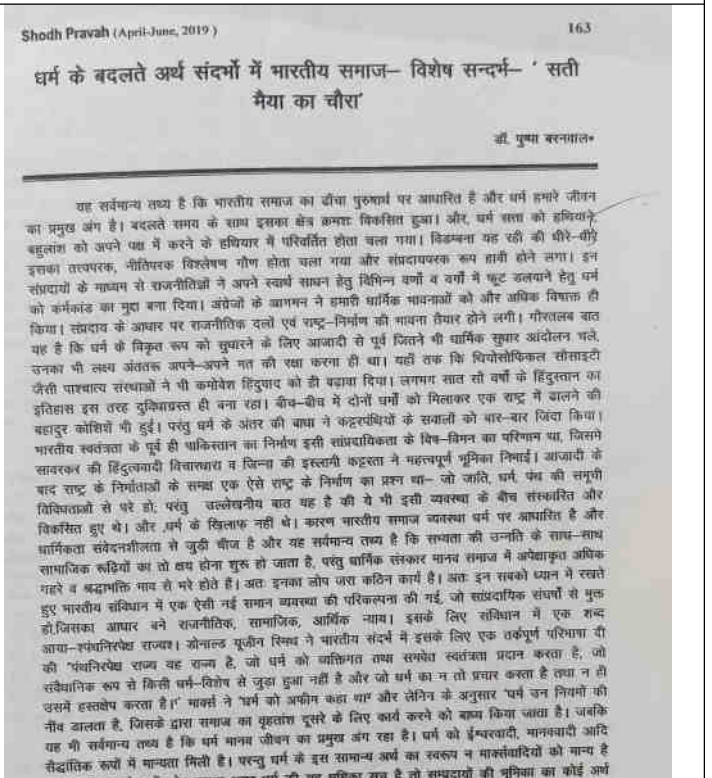
60	Name of the Author	Dr. B.K. Bhardwaj
	Title of the Paper/Vol./No./ Page	Role of Yoga in building a healthy society.
	Department of the Teacher	Physical Education
	Name of the Journal	A Journal of advances in management IT and social sciences
	Year of Publication	2019
	ISSN	2231-4571
	Link of the recognition in UGC enlistment of the Journal	






61	Name of the Author	Dr. Puspa Baranwal
	Title of the Paper/Vol./No./ Page	Prawasi Hindi Katha Sahitya men Samvedna ke Vividh roop, 15,2 53-56
	Department of the Teacher	Hindi
	Name of the Journal	Shadh Ritu, (peer revered nal Impactador Journal)
	Year of Publication	2019
	ISSN	2454-6242
	Link of the recognition in UGC enlistment of the Journal	www.shodhritu.com

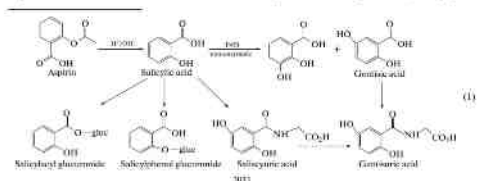


62	Name of the Author	Dr. Puspa Baranwal
	Title of the Paper/Vol./No./ Page	Dharm ke Badlte Arth sandarbhon men Samaj : Bhartiya Sarka chawa Sati Maiya Ka Chaura, 8,4, 5, 163-166
	Department of the Teacher	Hindi
	Name of the Journal	Shodh Pravah (UGC Care Listed)
	Year of Publication	2019
	ISSN	2249-6742

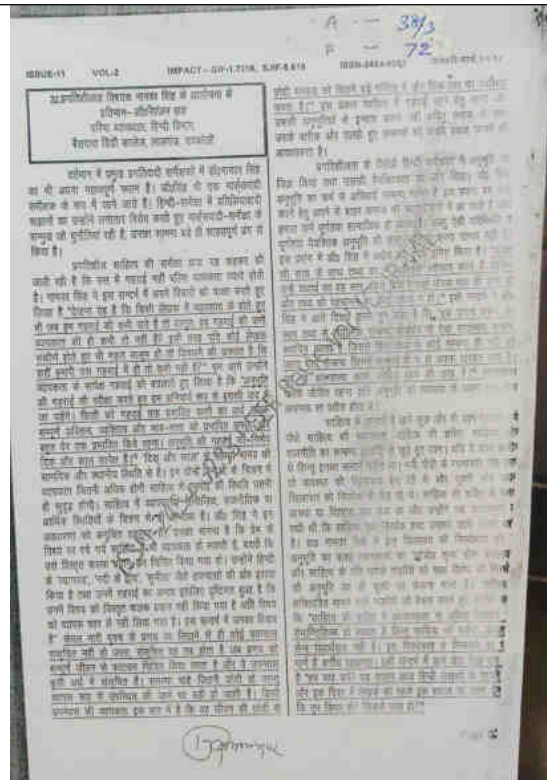


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63	Name of the Author	Dr. Puspa Baranwal	
	Title of the Paper/Vol./No./ Page	Dinkar Ki Yugeen Chetna Sandarth Vishesh Kurukshetra, 11, 5, 1959-61	
	Department of the Teacher	Hindi	
	Name of the Journal	Drishtikon (UGC Care Listed)	
	Year of Publication	2019	
	ISSN	0925-119X	
	Link of the recognition in UGC enlistment of the Journal	www.Uge-care-drishtikon.com	
64	Name of the Author	Sheila Srivastava	
	Title of the Paper/Vol./No./ Page	Comparative Study of Kinetic and Mechanistic Study of Oxidation of L-Alanine & L-Proline by Sodium Periodate using Osmium(VIII) as Catalyst in its Nano-Concentration Range 93(1) 69–79,	
	Department of the Teacher	Chemistry	
	Name of the Journal	Russian Journal of Physical Chemistry A	
	Year of Publication	2019.	
	ISSN	0036-0244	
	Link of the recognition in UGC enlistment of the Journal		

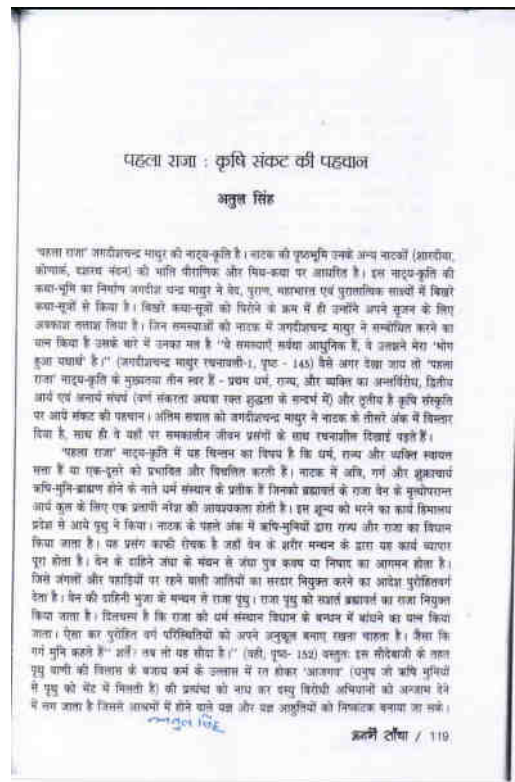
65	Name of the Author	Sheila Srivastava	<p style="text-align: center;">Available online at www.jaac.info ISSN: 2278-1862</p> <p style="text-align: center;">  Journal of Applicable Chemistry 2019, 8 (3): 1337-1349 (International Peer Reviewed Journal) </p> <p style="text-align: center;">A Thermodynamic and Comparative Study of Pharmaceutical Drug by Ir(III) and Pd(II) Catalyzed Oxidation in Acidic Medium (HClO₄): Kinetic Model</p> <p style="text-align: center;">Reena Patel¹, Shailesh Kumar¹, Arvind Kumar Pandey² and Sheila Srivastava^{3*}</p> <p style="text-align: center;">1. Department of Applied Chemistry, B.B.A.U. Lucknow, U.P. INDIA 2. Department of Chemistry University of Allahabad, U.P. INDIA 3. Department of Chemistry Feroze Gandhi College, Raebareilly, U.P. INDIA Email: shc_li72@yahoo.com</p> <p style="text-align: center;">Accepted on 16th April, 2019</p> <p>ABSTRACT <i>A comparative study of Pharmaceutical drug (Paracetamol) by Ir(III) and Pd(II) catalyzed oxidation in acidic medium (HClO₄) at 35°C to 45°C. The reaction is carried out in the presence of mercuric acetate as a scavenger for bromide ion. 1-carboxy cyclohexane 1-carboxic acid was obtained as the oxidation product and identified chromatographically. The rate law followed a first order and 2nd order dependence with respect to KBrO₃ and potassium chloride [KCl] respectively. The reaction followed first order with respect to Ir(III) and Pd(II) chloride. Negligible effect of [Hg(OAc)₂] and ionic strength of the medium was observed. The rate of reaction decreased with increasing [H⁺] was observed for the oxidation of paracetamol. Rate of reaction exhibits fractional positive order kinetics with respect to [PA]. The values of rate constants observed at different temperatures (30 to 45°C) were utilized to calculate the activation parameters. Quinonesimine and acetic acid have been identified as main oxidation products of the reactions. Feasible mechanism is proposed which are compared with the kinetics, stoichiometry and product of the reaction. The rate law has been derived from obtained kinetic data.</i></p> <p>Graphical Abstract</p>  <p>Keywords: Kinetics, Ir(III) chloride, Pd(II) chloride oxidation, Paracetamol, Potassium bromate, Acidic medium.</p> <p style="text-align: center;">INTRODUCTION</p> <p>The transition metal catalyzed reactions are important for the chemical industry from both practical and economic point of view. Transition metal ions are found to be good catalysts and their complexes</p> <p style="text-align: right;">1337</p>
	Title of the Paper/Vol./No./ Page	A Thermodynamic & Comparative Study of Pharmaceutical Drug by Ir(III) and Pd(II) Catalyzed Oxidation in Acidic Med. (HClO ₄): Kinetic Model”, 8(3), 1337-1349,	
	Department of the Teacher	Chemistry	
	Name of the Journal	J. APPLICABLE CHEMISTRY	
	Year of Publication	2019.	
	ISSN	2278-1862	
	Link of the recognition in UGC enlistment of the Journal		
66	Name of the Author	Sheila Srivastava	<p style="text-align: center;">CHEMISTRY & CHEMICAL TECHNOLOGY</p> <p style="text-align: center;">Chem. Chem. Technol., 2019, Vol. 13, No. 3, pp. 326–333</p> <p style="text-align: right;">Chemistry</p> <p style="text-align: center;">KINETICS OF Os(VIII) CATALYZED OXIDATION OF 2-PYRROLIDINE CARBOXYLIC ACID IN ALKALINE MEDIUM USING SODIUM PERIODATE AS OXIDANT: A MECHANISTIC APPROACH</p> <p style="text-align: center;">Madhu Gupta¹, Anvita Srivastava¹, Sheila Srivastava^{2*}, Ashish Verma¹</p> <p style="text-align: center;">https://doi.org/10.23939/chemt.13.03.326</p> <p>Abstract. The present paper deals with the kinetic and mechanistic investigation of Os(VIII) catalyzed oxidation of 2-pyrrolidinecarboxylic acid by sodium periodate (NaIO₄) in alkaline medium in the temperature range of 303–318 K. The experimental result shows a first order kinetics with respect to Os(VIII) and periodate while positive effect with respect to substrate i.e., 2-pyrrolidinecarboxylic acid was observed. The reaction showed negative effect for [OH⁻]. Negligible effect of Hg(OAc)₂ and ionic strength of the medium was observed. The reaction is carried out in the presence of mercuric acetate as a scavenger. The reaction of sodium periodate and 2-pyrrolidinecarboxylic acid in alkaline medium shows 2:1 stoichiometry. The values of rate constants observed at different temperatures were utilized to calculate the activation parameters. A mechanism involving the complex formation between a catalyst, substrate and oxidant has been proposed. L-glutamic acid has been identified as the main oxidation product of the reaction using chromatography and spectroscopy. Based on kinetic data, the reaction stoichiometry and product analysis of the reaction a feasible mechanism has been proposed. The rate law has been derived from obtained kinetic data.</p> <p>Keywords: kinetics, Os(VIII), oxidation, 2-pyrrolidinecarboxylic acid, sodium periodate, alkaline medium.</p> <p>1. Introduction</p> <p>Amino acids are the derivatives of protein in the diet or degradation of intracellular proteins is the final class of biomolecules and their oxidation makes a significant role in production of metabolic energy. Based upon the number of carbon atoms in the α-amino acids species, they get oxidized to α-keto glutamate, succinate, fumarate, oxaloacetate, etc. 2-Pyrrolidinecarboxylic acid (L-pro) is one among 20 α-amino acids with five-carbon atoms in pyrrolidine skeleton. This pyrrolidine ring is opened [1] by oxidation at the carbon atom most distant from the carboxylic group to produce a Schiff's base and hydrolysis of this Schiff's base produces a linear glutamic semi-aldehyde, which is further oxidized at the same carbon atom leading to glutamic acid. However, the earlier reports [2] reveal that L-pro undergoes oxidation with the cleavage of pyrrolidine ring at the nearest carbon atom from the carboxylic acid group followed by decarboxylation to produce 4-amino butanal or 4-amino butyric acid, whereas D-proline leads to keto acid. Since L-pro has a cyclic structure with an imino [3] group attached at one end by -CH₂ and at the other end by -CH-COOH, the cleavage at the closest carbon atom from carboxylic group is unusual. This may also be due to the less reactivity of α-carbon/hydrogen. Hence, the ring opening takes place at a carbon atom of far end from a carboxylic group. Moreover, when -NH₂ group is not present at α-carbon atom, there is no other driving force remaining for decarboxylation to produce butanal/butyric acid or keto acids. Some reports about the oxidation of L-pro claimed that the ring cleavage took place between N and C, by retaining the -NH₂ group with the main moiety without liberating ammonia, and the decarboxylation was proposed as a mechanism for the oxidation [4].</p>  <p>L-proline is one among non-essential amino acids and is an important component of collagen. According to [3], L-proline is considered to be the world's smallest natural enzyme and it plays an important role in catalysing the aldol condensation of acetone to various aldehydes with high stereo-specificity.</p> <p>¹Department of Chemistry, University of Lucknow, Lucknow, U.P., India ²Chemical Laboratories Feroze Gandhi College, Raebareilly, U.P., India *Sheila72@yahoo.com © Gupta, M., Srivastava, A., Srivastava S., Verma A., 2019</p>
	Title of the Paper/Vol./No./ Page	Kinetics of Os(VIII) catalyzed oxidation of 2-pyrrolidine carboxylic acid in alkaline med. using sodium periodate as oxidant: A Mechanistic Approach Vol. 13, No. 3, pp 326-333,	
	Department of the Teacher	Chemistry	
	Name of the Journal	Chemistry & Chemical Technology	
	Year of Publication	2019.	
	ISSN	1996-4196	
	Link of the recognition in UGC enlistment of the Journal		

67	Name of the Author	Sheila Srivastava	<p style="text-align: center;">DOI: 10.1134/S0013788X19010996</p> <p style="text-align: center;">CHEMICAL KINETICS AND CATALYSIS</p> <p style="text-align: center;">Comparative Study of Kinetic and Mechanistic Study of Oxidation of L-Alanine and L-Proline by Sodium Periodate Catalyzed by Osmium(VIII) in Micromolar Concentrations¹</p> <p style="text-align: center;">Madhu Gupta*, Amrita Srivastava[†], and Sheila Srivastava^{†*}</p> <p style="text-align: center;">[*]Department of Chemistry, University of Lucknow, Lucknow, Uttar Pradesh, India [†]Chemical Laboratories, Force Gandhi College, Raebareilly, Uttar Pradesh, India [*]e-mail: amrita.sri18@gmail.com Received March 11, 2019</p> <p>Abstract—The kinetics of oxidation of two aliphatic α-amino acids (AA), namely, alanine and proline by NaIO₄ has been investigated in alkaline medium in the presence of osmium(VIII) catalyst at a constant ionic strength of 1.0 mol dm⁻³ and at 25°C. The reactions were very slow to be measured in the absence of the catalyst. The reactions have a first order with respect both to [Os(VIII)] and [NaIO₄], and fractional order with respect to both [L-alanine] (Ala) and [L-proline] (Pro). The reaction shows negligible effect of dielectric constant and ionic strength of medium. Increasing [OH⁻] concentration was found to decrease the oxidation rates while mercuric acetate acts as scavenger for both the reactions. A plausible oxidation mechanism has been proposed and the rate law expression has been derived. Both spectral and kinetic evidences revealed formation of intermediate complexes between AA and Os(VIII) before the rate-controlling step. Kinetic investigations have revealed that the order of reactivity is Pro > Ala. The complex thus formed reacts with the oxidant [NaIO₄] by an inner-sphere mechanism with formation of the oxidation products of the amino acid which were identified as the corresponding carboxylic compounds, ammonium ion and carbon dioxide. The activation parameters of the first order rate constants were evaluated and discussed.</p> <p>Keywords: α-amino acids, [NaIO₄], kinetics, mechanism, oxidation, osmium(VIII) catalyst DOI: 10.1134/S0013788X19010996</p> <p>1. INTRODUCTION</p> <p>The transition metal ions (such as osmium, ruthenium and iridium and their mixtures) act as catalysts for different redox processes [1]. Os(VIII) as a catalyst plays significant role in some redox reactions [2, 3]. Osmium(VIII) gives stable compounds. OsO₄ can be reduced to +2, +4, and +6 oxidation states in acidic medium. However, in alkaline medium, it is reduced to +6 oxidation state only [4]. The unique property and most favorable reduction potential [5], of Os(VIII)/Os(VI) is +0.85 V in acidic and +0.30 V in alkaline media that helps it to act as catalyst with different oxidants in oxidation of relevant substrates whether they are organic or inorganic [6].</p> <p>Some aliphatic α-amino acids like alanine and proline, are involved in the biosynthesis of proteins. Alanine which is a non-essential amino acid is synthesized in the human body from pyruvate and branched chain amino acids such as valine, leucine, and isoleucine. Alanine plays a key role in glucose-alanine cycle between tissues and liver. The glucose-alanine cycle is involved in removal of pyruvate and glutamate from the muscles and their transport to the liver. Basically it occurs in animal protein sources like poultry, beef, pork and fish. L-Ala levels increase during muscle contraction in human body. L-Ala has chief role in transfer of nitrogen from body tissues to liver and is also involved in gluconeogenesis [7, 8]. Similarly L-proline, a non-essential amino acid, is an important component of collagen. According to [9], L-proline catalyzes alkyl condensation of acetone with various aldehydes with high stereo-specificity. It is the smallest natural enzyme in the world. L-Proline is oxidized with the cleavage of pyrrolidine ring at the nearest carbon atom from the carboxylic acid group followed by decarboxylation to 4-aminobutanal or 4-aminobutyric acid, whereas D-proline produces ketoacid. Oxidation of amino acids (AA) is a significant field of organic chemistry due to the mechanism of amino acid metabolism.</p> <p>There is extensive literature on the kinetics of the periodate oxidation of amino alcohols [10, 11], dicarbonyl compounds [6], and amino acids [10]. Periodate is a clean and very selective reagent for the oxidation of</p> <p>[†] The article is published in the original.</p>
Title of the Paper/Vol./No./ Page	Comparative study of kinetic and mechanistic study of oxidation of L-Alanine and L-proline by sodium periodate catalyzed by Osmium(VIII) in Micromolar concentration Vol.93, No. 1, pp 48-58		
Department of the Teacher	Chemistry		
Name of the Journal	Russian Journal of Physical Chemistry A		
Year of Publication	2019.		
ISSN	0036-0244		
Link of the recognition in UGC enlistment of the Journal			
68	Name of the Author	Sheila Srivastava	<p style="text-align: center;">DOI: 10.1134/S0013788X19010996</p> <p style="text-align: center;">CHEMICAL KINETICS AND CATALYSIS</p> <p style="text-align: center;">Kinetic, Spectroscopic and DFT Studies of Novel Oxidation of Acetylsalicylic Acid by NaIO₄ using Micro-amount of Os(VIII) as a Homogeneous Catalyst in Alkaline Medium</p> <p style="text-align: center;">Amrita Srivastava^{†*}, Madhu Gupta^{†*}, and Sheila Srivastava^{†*}</p> <p style="text-align: center;">[*]Department of Chemistry, University of Lucknow, Lucknow, Uttar Pradesh, India [†]Chemical Laboratories, Force Gandhi College, Raebareilly, Uttar Pradesh, India [*]e-mail: amrita.sri18@gmail.com [*]e-mail: madhu1990@gmail.com [*]e-mail: sheila20@yahoo.com</p> <p style="text-align: center;">Received September 11, 2018; accepted September 11, 2018; accepted November 13, 2018</p> <p>Abstract—Kinetics of Os(VIII) catalyzed oxidation of acetylsalicylic acid by NaIO₄ in alkaline medium have been explored and p-benzoquinone is identified as product with its natural elucidation. All osmium chemical calculations performed by density functional theory (DFT) with B3LYP/6-311++(2,2) basis set were set for oxidizing-strength, reaction and mechanism. Molecular orbital energies, nonlinear optical properties, bond length, bond angles, reactivity, electrophilic and nucleophilic regions were delineated. Influence of various reactants on rate of chemical reaction were also ascertained and elucidated spectro-photometrically. Activation parameters have been assessed using Arrhenius-Eyring plots. A suitable mechanism consistent with observed kinetic results has been implicated and rate law deduced.</p> <p>Keywords: DFT, sodium periodate, acetylsalicylic acid, Os(VIII), oxidation DOI: 10.1134/S0013788X19010996</p> <p>1. INTRODUCTION</p> <p>Non-steroidal anti-inflammatory drugs (NSAIDs) block the cyclo-oxygenase (COX) enzyme, coordinated in the first step of the arachidonic acid cycle. COX prevails in two isoforms (COX-1 and COX-2). The first is implicated in stomach, kidneys and platelets and is pre-oxidized in increased production and platelet function. COX-2 is inducible and plays vital role in prostaglandin biosynthesis in inflammatory cells [1]. Aspirin is exemplar NSAID and is used to approach pain, fever and inflammation. Aspirin also contains platelet aggregation. It is a non-selective COX-2 inhibitor and correlates with the isoforms of COX enzyme. ASA (Acetylsalicylic acid) or aspirin has been used to forewarn heart attack, stroke, blood clot formation [1] and have anticancer properties [2–7]. Noninflammation is salutary qualities; the famous non-steroidal anti-inflammatory medicine may be associated with some adverse effects because people with gastro-intestinal disorders, such as gastric and peptic ulcers, seek medical advice before using aspirin. Because aspirin may irritate stomach bleeding even in healthy individuals, especially when taken with alcohol. Humans metabolize salicylic acid in a number of different ways (Fig. 1), or compound can be directly excreted [1–11] [8].</p> 
Title of the Paper/Vol./No./ Page	Kinetic, Spectroscopic and DFT Studies of Novel Oxidation of Acetylsalicylic Acid by NaIO ₄ using Micro-amount of Os(VIII) as a Homogeneous Catalyst in Alkaline Medium” 93(10), pp.2031-2039		
Department of the Teacher	Chemistry		
Name of the Journal	Russian Journal of Physical Chemistry A		
Year of Publication	2019.		
ISSN	0036-0244		
Link of the recognition in UGC enlistment of the Journal			

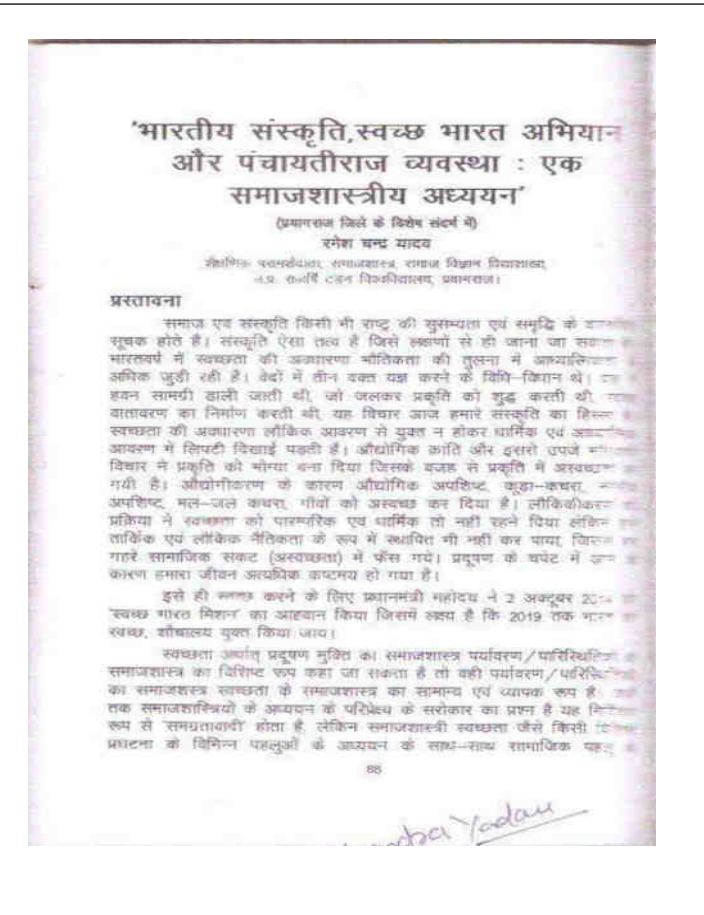
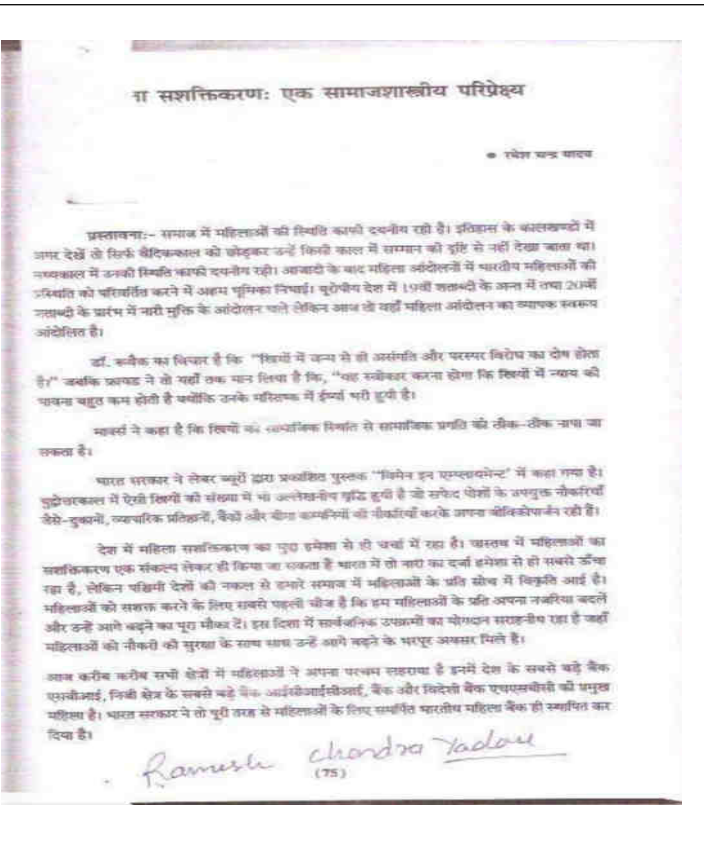
69	Name of the Author	Dr. Niranjana Rai
	Title of the Paper/Vol./No./ Page	Pragatisheelta Vishayak Namwar Singh Ke Alochana Ke Pratiman, 11(2), 82
	Department of the Teacher	Hindi
	Name of the Journal	Shodh Ritu
	Year of Publication	2018
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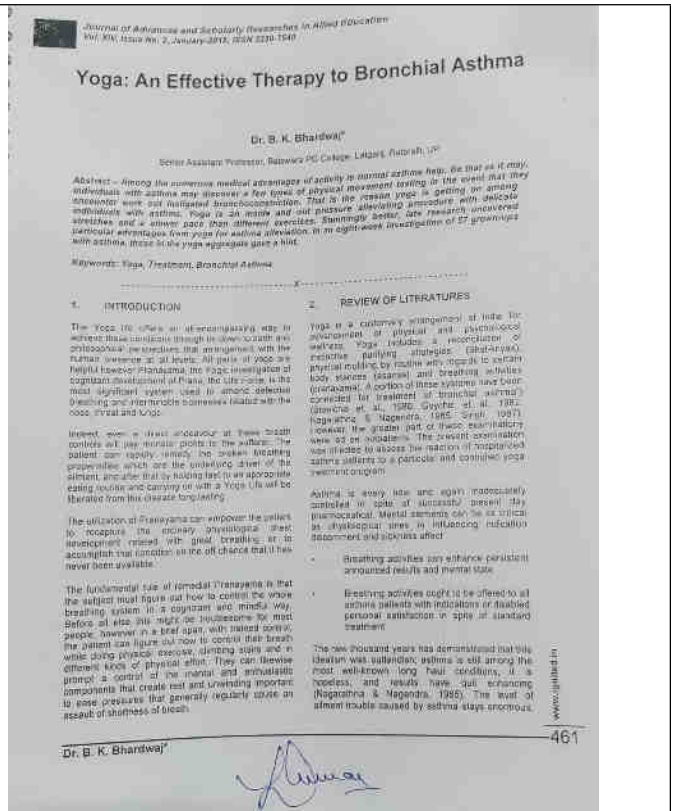
70	Name of the Author	Dr. Atul Singh
	Title of the Paper/Vol./No./ Page	First King: Identification of agricultural crisis
	Department of the Teacher	Hindi
	Name of the Journal	Anbhait template
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	Link of the recognition in UGC enlistment of the Journal	



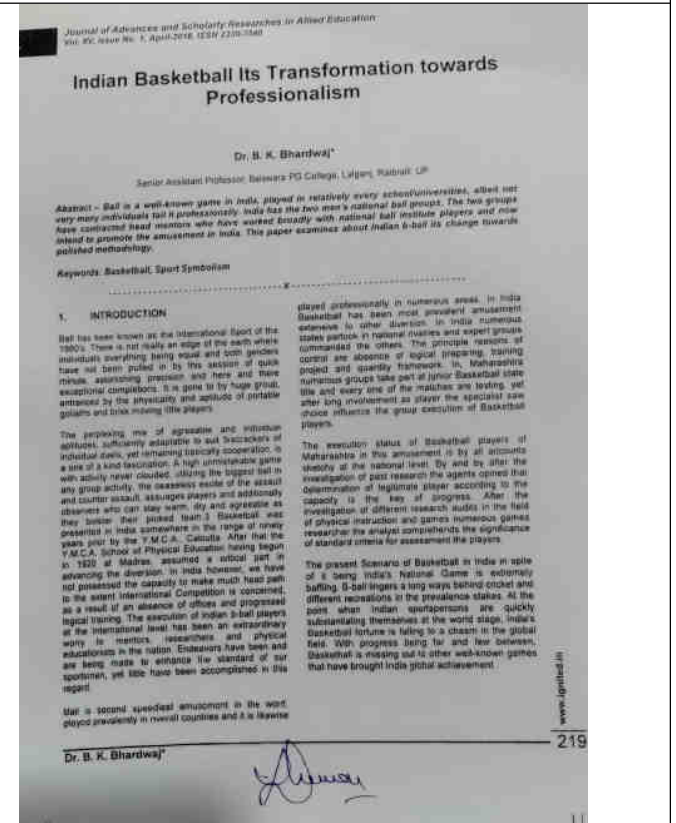
71	Name of the Author	Ramesh Chandra Yadav
	Title of the Paper/Vol./No./ Page	"Mahila sashaktikaran: A Sociological Perspective", pp76- 80
	Department of the Teacher	Sociology
	Name of the Journal	Mahila Sashaktikaran: Chunautiya and sambhavanayien
	Year of Publication	2018
	ISSN	81-902348-5-4
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72	Name of the Author	Ramesh Chandra Yadav
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	Department of the Teacher	Sociology
	Name of the Journal	Global vision in Indian culture
	Year of Publication	2018
	ISSN	097881-935779-8-1
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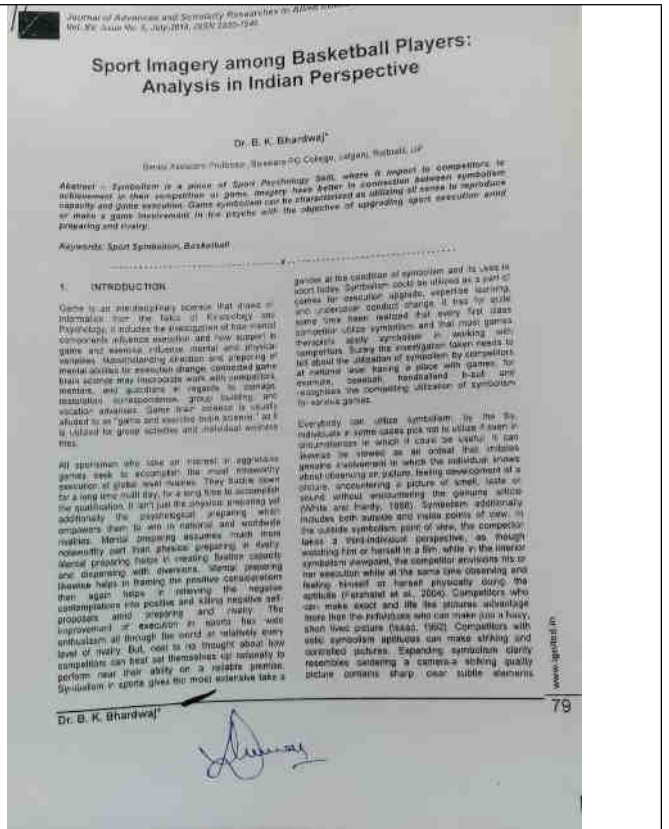
73	Name of the Author	Dr. B.K. Bhardwaj
	Title of the Paper/Vol./No./ Page	Yoga: An effective therapy to bronchial asthma
	Department of the Teacher	Physical Education
	Name of the Journal	Journal of advances and Scholarly Researches in allied education
	Year of Publication	2018
	ISSN	2230-7540
	Link of the recognition in UGC enlistment of the Journal	



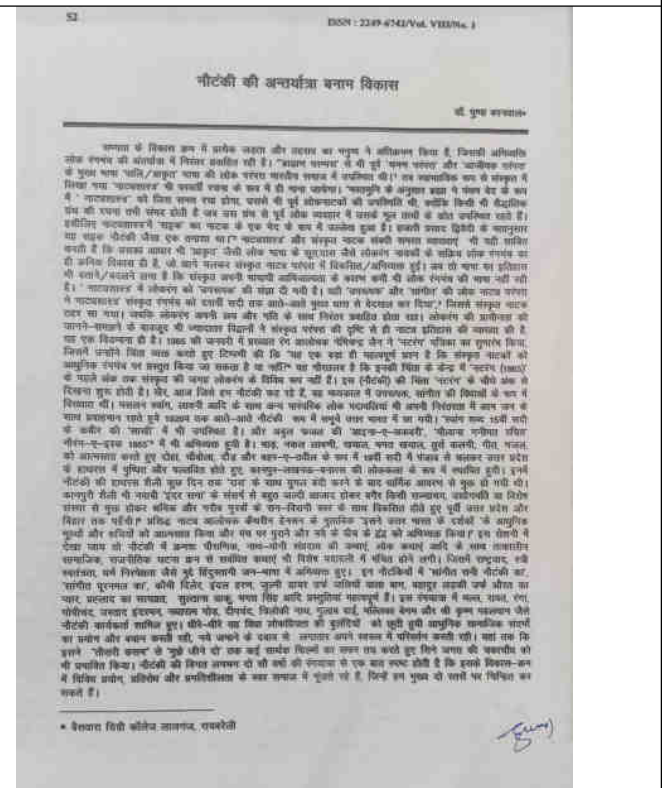
74	Name of the Author	Dr. B.K. Bhardwaj
	Title of the Paper/Vol./No./ Page	Indian basketball its transformation towards professionalism
	Department of the Teacher	Physical Education
	Name of the Journal	Journal of advances and Scholarly Researches in allied education
	Year of Publication	2018
	ISSN	2230-7540
	Link of the recognition in UGC enlistment of the Journal	



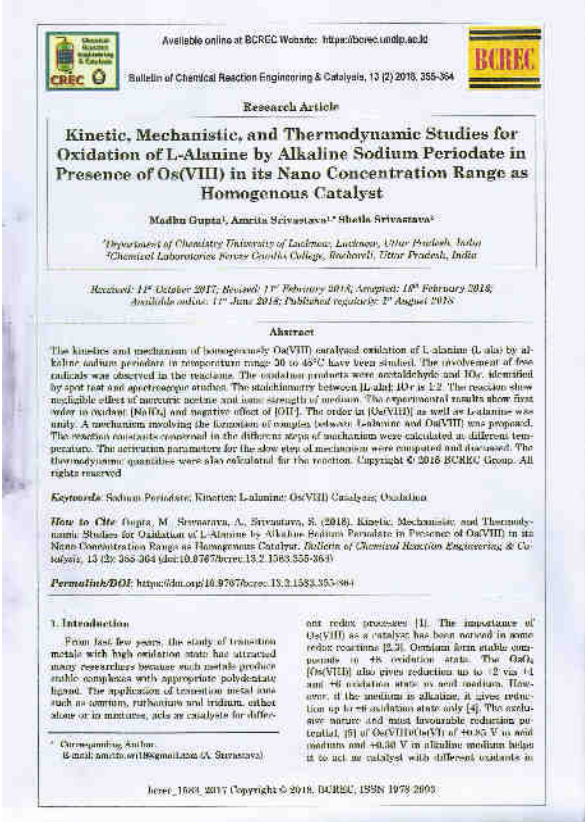
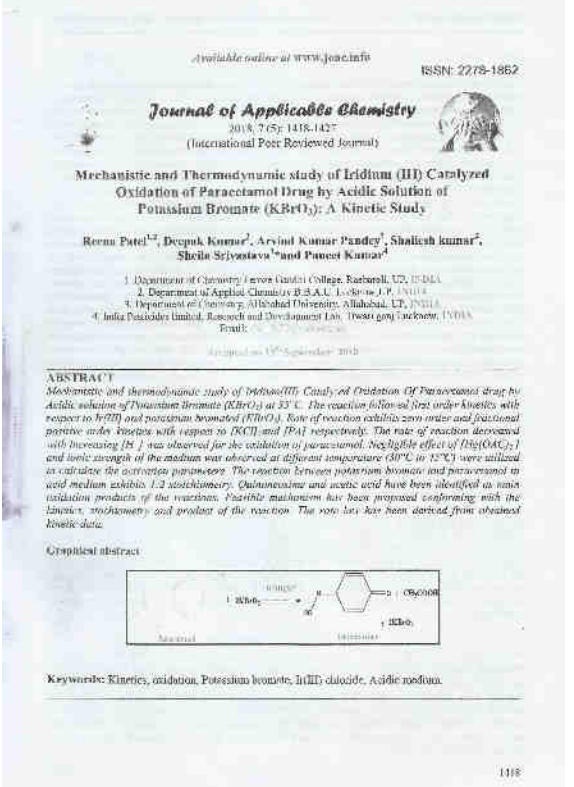
75	Name of the Author	Dr. B.K. Bhardwaj
	Title of the Paper/Vol./No./ Page	Sports imagery among basketball players: analysis in Indian perspective
	Department of the Teacher	Physical Education
	Name of the Journal	Journal of advances and Scholarly Researches in allied education
	Year of Publication	2018
	ISSN	2230-7540
	Link of the recognition in UGC enlistment of the Journal	



76	Name of the Author	Dr. Puspa Baranwal
	Title of the Paper/Vol./No./ Page	Notanki ki Antaryatra Banam Vikas, Vol. 8, no. 1 52-58
	Department of the Teacher	Hindi
	Name of the Journal	Shodh Pravah (UGC Care Listed)
	Year of Publication	2018
	ISSN	2249-6742
	Link of the recognition in UGC enlistment of the Journal	



77	<p>Name of the Author Sheila Srivastava</p> <p>Title of the Paper/Vol./No./ Page Microamount of Pd(II) Catalyzed Oxidn of Neuroleptic Drug (Gabapentin) by Potassium Bromate (KBrO₃) in Perchloric Acid Medium : A Kinetic Study” 4(1), 207-214</p> <p>Department of the Teacher Chemistry</p> <p>Name of the Journal IJSRSET,</p> <p>Year of Publication 2018</p> <p>ISSN 2395-1990,</p> <p>Link of the recognition in UGC enlistment of the Journal</p>	<p>© 2018 IJSRSET Volume 4 Issue 1 Print ISSN : 2395-1990 Online ISSN : 2394-4741 Themed Section : Engineering and Technology</p> <p>Microamount of Pd(II) Catalyzed Oxidation of Neuroleptic Drug (Gabapentin) by Potassium Bromated (KBrO₃) in Perchloric (HClO₄) Acid Medium : A Kinetic Study</p> <p>Reema Patel¹, Shailesh Kumar², Abhishek Verma³, Sheila Srivastava^{4*}</p> <p>¹Ph.D student, Department of Applied Chemistry B.B.A.U. Lucknow, Uttar Pradesh, India ²Assistant Professor, Department of Applied Chemistry B.B.A.U. Lucknow, Uttar Pradesh, India ³Associate Professor, Department of Chemistry Fateh Gunthi College, Raebareilly, Uttar Pradesh, India</p> <p>ABSTRACT</p> <p>Here we investigated the kinetics of Pd(II) catalyzed oxidation of gabapentin by potassium bromate in acidic medium and in temperature range 30-45°C. Potassium bromate shows excellent oxidant properties and first order kinetics is observed with respect to it. Oxidation rate is also found to be first order with respect to catalyst, Pd(II). The reaction is carried out in the presence of mercapto acetate as a scavenger for chloride ion. The experimental results show first order kinetics with respect to the catalyst Pd(II) while zero order with respect to substrate, i.e. gabapentin was observed. The reaction shows negligible effect of [H₂OAc⁺], and ionic strength of the medium. [H⁺] and Chloride ion positively influence the rate of reaction. The reaction between potassium bromate and gabapentin in acidic medium shows 1:2 stoichiometry. To calculate activation parameters, the reactions have been studied at four different temperatures between 30 to 45°C. A mechanism involving the complex formation between catalyst and oxidant has been proposed. [1-carboxy cyclohexane-1-acetic acid] acid has been identified chromatographically and spectroscopically as the final product of oxidation of gabapentin. Based on the kinetic data, reaction stoichiometry and product analysis, a reaction mechanism has been proposed and rate law has been derived.</p> <p>Keywords: Kinetics, Potassium Bromated, Gabapentin, Pd(II)</p> <p>I. INTRODUCTION</p> <p>Potassium bromate [Br(V)] is known to be a powerful oxidizing agent with redox potentials of 1.44 V in acid medium and 0.61V in alkaline medium. It has widely been used in the oxidation of many organic compounds^[1]. The bromate species has been reported as an oxidizing agents in acidic as well as alkaline medium^[2]. Earlier it was reported that bromate ion, formed by the reduction of BrO₃⁻ give rise to molecular bromine which acts parallel oxidation of gabapentin. In order to obviate molecular bromine oxidation and to ensure pure bromated oxidation oxidation mercuric acetate, which is used as bromide ion scavenger^[3], was added to the reaction mixture. The kinetics of redox reactions involving homogeneous catalyst such as platinum group metals particularly osmium (VIII), Rh(III), Palladium(II) and ruthenium(III) have extensively been investigated from the mechanistic point of view. The mechanism of the reaction depends upon the nature of the oxidant, nature of the substrate and ways in which transition metal complex ion play their role in order to promote the reactant molecules to the activated state before changing into the final products under experimental conditions. Palladium(II) chloride is the most important salt in the catalytic chemistry of palladium the kinetics for the oxidation of ethylene aqueous Pd(II) is the example^[4]. Recently palladium(II) chloride^[5] has been reported by several workers to be an effective catalyst under both acidic and alkaline medium conditions with suitable oxidizing agents. Hence the choice of Pd(II) chloride as a suitable catalyst for the present work has been considered on the basis of following facts:</p>
78	<p>Name of the Author Sheila Srivastava</p> <p>Title of the Paper/Vol./No./ Page Thermodynamic prop. and Mechanism of Aquachloro iridium(III) Catalyzed Oxidn of Pharmaceutical drug (Paracetamol) by Acidic solution of Potassium Bromate (KBrO₃) A kinetic study”, 6 (1), 2013-2022</p> <p>Department of the Teacher Chemistry</p> <p>Name of the Journal IJSRSET,</p> <p>Year of Publication 2018</p> <p>ISSN 2321-9653</p>	<p>International Journal for Research in Applied Science & Engineering Technology (IJRASSET) ISSN : 2321-9653; E-Print : 2321-9653; Impact Factor : 6.887 Volume 6 Issue 1 January 2018. URL: www.ijrasset.com</p> <p>Thermodynamic properties and Mechanism of Aquachloro iridium (III) Catalyzed Oxidation of Pharmaceutical drug (Paracetamol) by Acidic solution of Potassium Bromate (KBrO₃): A kinetic study</p> <p>Reema Patel¹, Shailesh Kumar², Abhishek Verma³, Sheila Srivastava^{4*}</p> <p>¹Ph.D student, Department of Applied Chemistry B.B.A.U. Lucknow, Uttar Pradesh, India ²Assistant Professor, Department of Applied Chemistry B.B.A.U. Lucknow, Uttar Pradesh, India ³Associate Professor, Department of Chemistry Fateh Gunthi College, Raebareilly, Uttar Pradesh, India</p> <p>Abstract: The thermodynamic properties and mechanism of aquachloro iridium(III) catalyzed oxidation of pharmaceutical drug paracetamol by acidic solution of potassium bromate (KBrO₃) at 25°C. The reaction follows first order kinetics with respect to Ir(III) and potassium bromate (KBrO₃). Rate of reaction decreases with increasing [H⁺] was observed for the oxidation of paracetamol. Negligible effect of [H₂OAc⁺] and ionic strength of the medium was observed at different temp. 30 C to 45°C were studied to calculate the activation parameters. The reaction between potassium bromate and paracetamol in acid medium exhibits 1:2 stoichiometry. Quinoneacetic acid has been identified as main oxidation product of the reaction. A viable mechanism has been proposed conforming to the kinetics, stoichiometry and product of the reaction. The rate law has been derived from obtained kinetic data.</p> <p>Key words: Kinetics, oxidation, Paracetamol, Potassium bromate, Ir(III), chloride, Acidic medium.</p> <p>I. INTRODUCTION</p> <p>Catalysis by transition metal ions plays an important role in understanding the mechanistic aspects of a particular redox reaction. Ir(III) chloride is a strong oxidant and has been conventionally prepared either by the action of chlorine on iridium powder at 600-620°C^[1] or from the hexachloroiridate (Oxide), by the action of chlorine at 500°C^[2]. Ir(III) chlorides is known to have a large range of reactions. It is reduced from its hexamer to a monomeric form (IrCl₃·3H₂O) in the presence of water. The rate of chlorination of metal is affected in presence of sunlight or atmospheric light. The addition of a trace of carbon monoxide diminishes the rate of reaction of Ir(III) and increases it in atmosphere^[3]. The kinetics of redox reactions involving certain transition metal ions like osmium(VIII), ruthenium(VIII), ruthenium(III), and ruthenium(VII) as homogeneous catalysts has been extensively investigated^[4]. These are well known as homogeneous catalyst species by several workers^[5-7]. Some attention has been paid on catalytic role of iridium(III) Ir(III) with potassium bromate as oxidant^[8-10]. Ir(III) chloride is used in a good number of many systems. It has been also observed that Ir(III) as a homogeneous catalyst for the oxidation of organic compounds^[11]. Ir(III) chloride has also been used in catalysis in the homogeneous oxidation^[12] of some organic compounds. Kinetics of Ir(III) catalyzed oxidation has also been reported^[13]. Oxidation reaction for the present work is potassium bromate (KBrO₃) which has been reported to be a powerful oxidant, will reduce potential of Ir(III) with in acidic media. Ir(III) chlorides are used in oxidation of ethylene^[14], benzene^[15], toluene^[16], phenols^[17], phenolics^[18], aldehydes^[19], ketones^[20], acids^[21], amines^[22], pyridines^[23], oximes^[24], alcohols^[25], aldehydes^[26], carboxylic acids^[27] and α-hydroxy ketone group^[28] etc. Ir(III) chlorides is used in a good number of many systems. It has been also observed that Ir(III) as a homogeneous catalyst for the oxidation of organic compounds^[11]. Ir(III) chloride has also been used in catalysis in the homogeneous oxidation^[12] of some organic compounds. Kinetics of Ir(III) catalyzed oxidation has also been reported^[13]. Oxidation reaction for the present work is potassium bromate (KBrO₃) which has been reported to be a powerful oxidant, will reduce potential of Ir(III) with in acidic media. Ir(III) chlorides are used in oxidation of ethylene^[14], benzene^[15], toluene^[16], phenols^[17], phenolics^[18], aldehydes^[19], ketones^[20], acids^[21], amines^[22], pyridines^[23], oximes^[24], alcohols^[25], aldehydes^[26], carboxylic acids^[27] and α-hydroxy ketone group^[28] etc.</p>

	Link of the recognition in UGC enlistment of the Journal		
79	Name of the Author	Sheila Srivastava	
	Title of the Paper/Vol./No./ Page	Kinetic, Mechanistic and Thermodynamic Studies for Oxidn of L-Alanine by Alk. Sodium Periodate in Presence of Os(VIII) in its Nano Concentration Range as Homogenous Catalyst 13(2), 355-364	
	Department of the Teacher	Chemistry	
	Name of the Journal	Bulletin of Chemical Reaction Engg & Catalysis	
	Year of Publication	2018	
	ISSN	1978-2993-	
	Link of the recognition in UGC enlistment of the Journal		
80	Name of the Author	Sheila Srivastava	
	Title of the Paper/Vol./No./ Page	Mechanistic and Thermodynamic study of Iridium (III) Catalyzed Oxidn of Paracetamol Drug by Acidic solution of Potassium Bromate (KBrO3): A kinetic study, 7(5), 1418-27	
	Department of the Teacher	Chemistry	
	Name of the Journal	Journal of Applicable Chemistry,	
	Year of Publication	2018	
	ISSN	2278-1862-	
	Link of the recognition in UGC enlistment of the Journal		

81	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Kinetics of Ir(III) Catalyzed Oxidative Decarboxylation and Deamination of L-phenylalanine by Chloramine-T: A Mechanistic Approach , 7(5), 1450-1460
	Department of the Teacher	Chemistry
	Name of the Journal	Journal of Applicable Chemistry
	Year of Publication	2018
	ISSN	2278-1862
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82	Name of the Author	Dr. Niranjan Rai
	Title of the Paper/Vol./No./ Page	Pragatisheel Hindi Alochana mei Muktibodh ka Alochakiya Hastakshep, 8(2), 63
	Department of the Teacher	Hindi
	Name of the Journal	Shodh Ritu
	Year of Publication	2017
	ISSN	2454-6283
	Link of the recognition in UGC enlistment of the Journal	

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ISSN: 2278-1862

Journal of Applicable Chemistry
2018, 7 (5): 1450-1460
(International Peer Reviewed Journal)

Kinetics of Ir(III) Catalyzed Oxidative Decarboxylation and Deamination of L-phenylalanine by Chloramine-T: A Mechanistic Approach

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Accepted on 24th August, 2018

ABSTRACT
The kinetics and mechanism of homogeneously Ir(III) chloride catalyzed oxidation of L-phenylalanine by chloramine-T [CAT] has been investigated in perchloric acidic medium in presence of mercuric acetate as a scavenger in the temperature range 30°C-45°C. The experimental results show first order kinetics with respect to the oxidant [CAT] and catalyst [Ir(III)] while positive effect with respect to substrate i.e. L-Phenylalanine was observed. The reaction shows negligible effect of [Hg(OAc)₂], [H⁺] and ionic strength (μ) of the medium. Chloride ion positively influenced the rate of reaction. The reaction between chloramine-T and substrate (L-Phenylalanine) in acid medium shows 1:1 stoichiometry. To calculate activation parameters, the reactions have been studied at four different temperatures between 30 to 45°C. A mechanism involving the complex formation between catalyst, substrate and oxidant has been proposed. Phenyl acetaldehyde has been identified chromatographically and spectroscopically as the final product of oxidation of L-Phenylalanine. Based on the kinetic data, reaction stoichiometry and product analysis, a reaction mechanism has been proposed and rate law has been derived.

Graphical Abstract

Preparation of 2,4-dinitrophenylhydrazine derivative

Keywords: Kinetics, Mechanism, Ir(III) catalysis, Amino acids, Chloramine-T, Acidic medium.

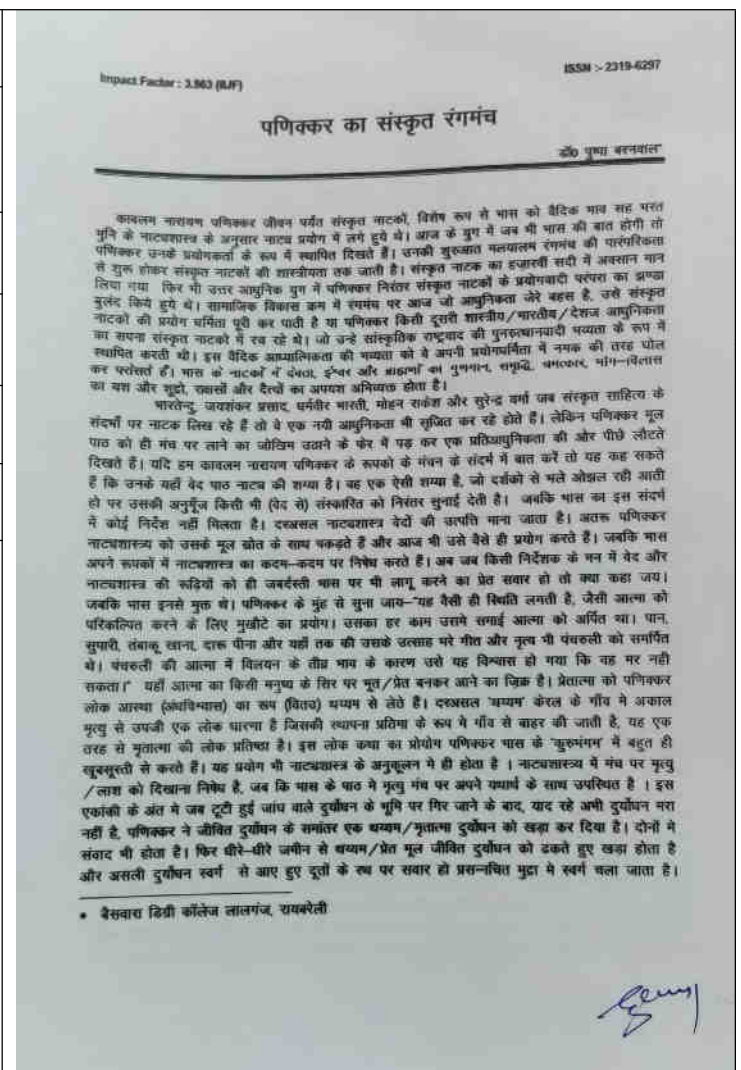
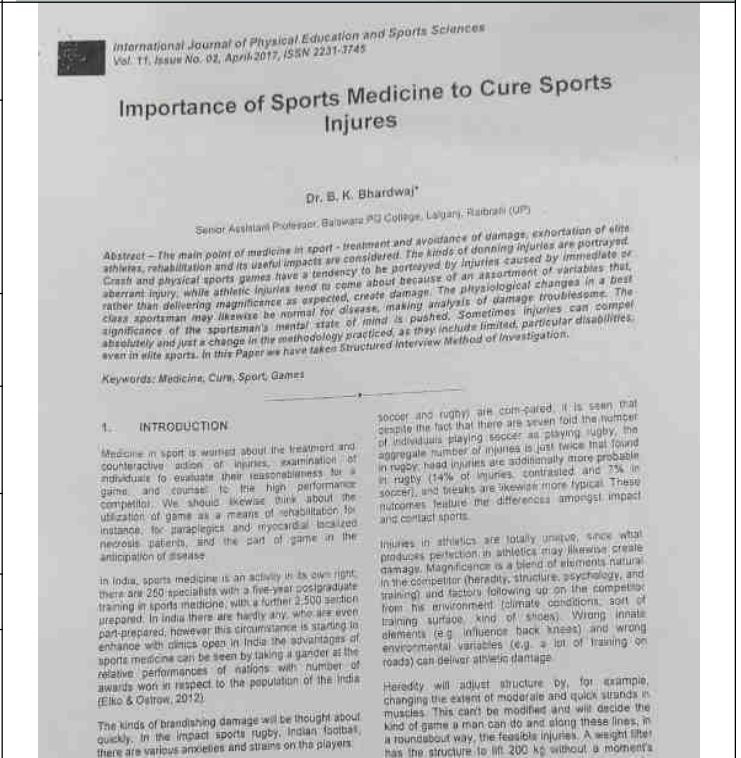
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ISSUE-04
23 प्रगतिशील हिन्दी अलोचना में मुक्तिबोध का अलोचकीय हास्तक्षेप
—प्रगतिशील रूप—
हिन्दी अलोचना में मुक्तिबोध
मेधावती हिन्दी अलोचना, राबरेली

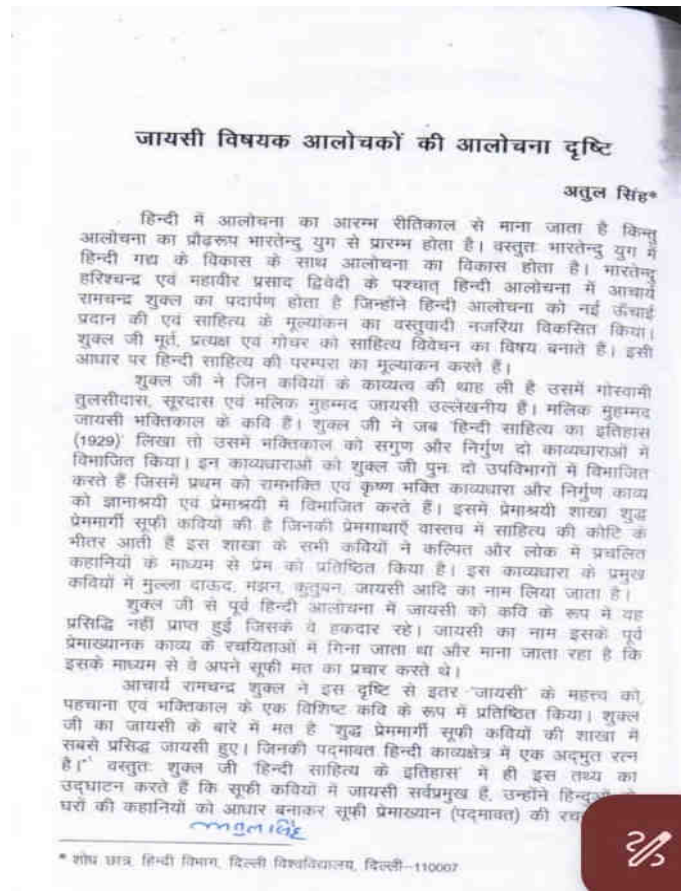
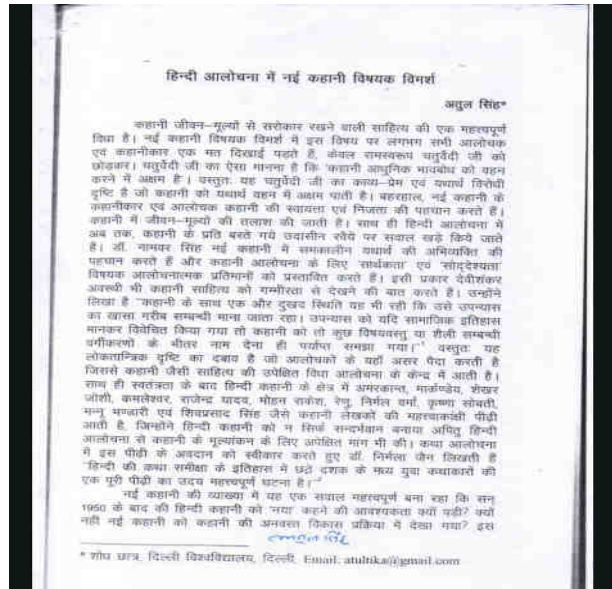
IMPACT- 5.955
ISSN-2454-6283
P-68
april-june-2017

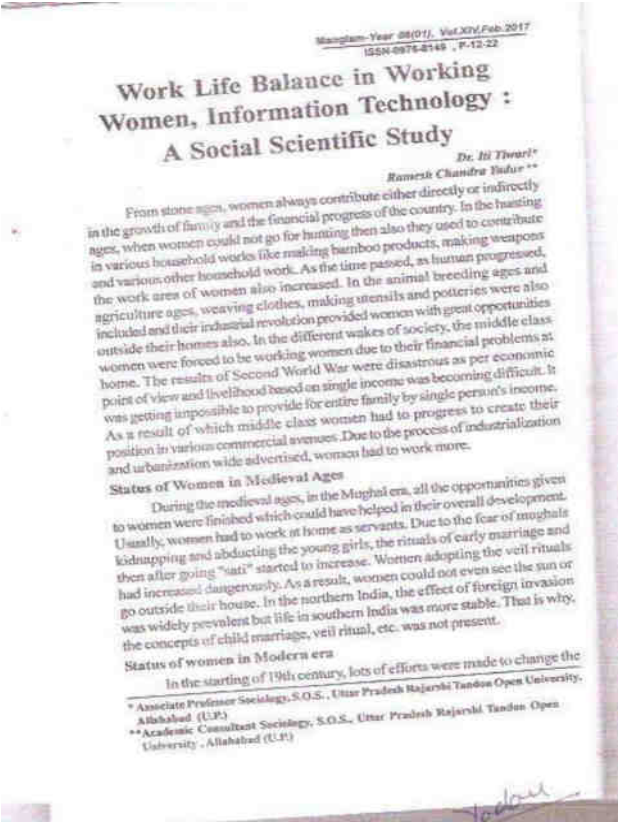

हिन्दी अलोचना में मुक्तिबोध का अलोचकीय हास्तक्षेप... (The text continues with a detailed analysis of Mukhibodh's work in Hindi Alochana, discussing its literary and critical significance.)

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83	Name of the Author	Dr. Puspa Baranwal	
Title of the Paper/Vol./No./ Page	Parikkar Ka Sanskrit Rangmanch, vol. 4.1, no. 17, 201-204		
Department of the Teacher	Hindi		
Name of the Journal	The Original Source (UGC Care Listed)		
Year of Publication	2017		
ISSN	2319-6297		
Link of the recognition in UGC enlistment of the Journal	<p>कमलम नारायण पणिकर जीवन पर्यंत संस्कृत नाटकों, विशेष रूप से भास को वैदिक भास सह परंतु युग के नाट्यशास्त्र के अनुसार नाट्य प्रयोग में लगे हुए थे। आज के युग में जब भी भास की बात होगी तो पणिकर उनके प्रयोगकर्ता के रूप में स्थापित दिखते हैं। उनकी मुख्यतः मलयालम रंगमंच की परंपरिकता से युक्त होकर संस्कृत नाटकों की शास्त्रीयता तक जाती है। संस्कृत नाटकों के प्रयोगवादी परंपरा का प्रपञ्च लिखा गया फिर भी उत्तर आधुनिक युग में पणिकर विद्वान् संस्कृत नाटकों के प्रयोगवादी परंपरा का प्रपञ्च सुलभ किया करते थे। सामाजिक विकास क्रम में स्वयंसेवक पर आज जो आधुनिकता जैसे महत्व है, उसे संस्कृत नाटकों की प्रयोग चर्चाओं में रख पाती है या पणिकर किसी दूसरी शास्त्रीय/शास्त्रीय/देशज आधुनिकता का सपना संस्कृत नाटकों में रख रहे थे। जो उन्हें सांस्कृतिक राष्ट्रवाद की पुनरुत्थानवादी परंपरा के रूप में स्थापित करती थी। इस वैदिक आधुनिकता की मायता को वे अपनी प्रयोगचर्चा में नमक की तरह घोल कर परिलक्षित हैं। भास के नाटकों में वेदों, इन्द्र और अश्विनी का युगमान, समुद्र, अमरत्व, मोक्ष-विमोक्ष का यश और सुदो, ज्ञासी और देवी का अपराध अभिव्यक्त होता है।</p> <p>शास्त्रीय-परंपरागत ब्रह्मा, धर्मवीर भारतीय, मोहन राकेश और सुन्दर नामों जब संस्कृत साहित्य के संदर्भों पर नाटक लिख रहे हैं तो वे एक नयी आधुनिकता भी सुझाते हैं। लेकिन पणिकर मूल पाठ को ही मंच पर लाने का जोरिम चलाने के फेर में पड़ कर एक प्रतियुगनिका की ओर पीछे लौटते दिखते हैं। यदि हम काव्यम नारायण पणिकर के रूपों के मंचन के संदर्भ में बात करें तो यह कह सकते हैं कि उनके यहाँ वेद पाठ नाटक की शय्या है। यह एक ऐसी शय्या है, जो दर्शकों से भले ओझस रही जाती हो पर उसकी अनुभूति किसी भी वेद से संस्कारित को निरंतर सुनाई देती है। जबकि भास उन संदर्भों में कोई निर्देश नहीं मिलता है। दखलना नाट्यशास्त्र वेदों की संपत्ति माना जाता है। अतः पणिकर नाट्यशास्त्र को उसके मूल स्रोत के साथ नकलते हैं और आज भी उसे वैसे ही प्रयोग करते हैं। जबकि भास अपने रूपों में नाट्यशास्त्र का कदम-कदम पर निषेध करते हैं। जब जब किसी निर्देशक के मन में वेद और नाट्यशास्त्र की रुढ़ियों को ही जबरदस्ती भास पर भी लागू करने का प्रेरणित हो तो क्या कहा जाय। जबकि भास इनसे मुक्त थे। पणिकर के मूँह से सुना जाय-“यह वही ही स्थिति लगती है, जैसी आत्मा को परिकल्पित करने के लिए मुझीत का प्रयोग। उसका हर काम चरमे सम्राई आत्मा को अर्पित था। पान्, सुपायी, रंभाक, खाना, दारु पीना और यहाँ तक की चरके उल्लास परे गीत और नृत्य भी पंखली को समर्पित थे। पंखली की आत्मा में विमलन के तीव्र भाव के कारण पुरे यह विस्वास हो गया कि वह मर नहीं सकता।” यहाँ आत्मा का किसी मनुष्य के तिर पर मूल/प्रेत बनकर आने का चिह्न है। प्रेतात्मा को पणिकर लोक आत्मा (अर्थात्विभास) का रूप (वितर) धम्म से लेते हैं। दखलना धम्म केरल के गाँव में अकाल मृत्यु से उपजी एक लोक धारणा है जिसकी स्थापना प्रथमा के रूप में गाँव से बाहर की जाती है, यह एक तरह से मृतात्मा की लोक प्रतिष्ठा है। इस लोक कथा का प्रयोग पणिकर भास के “सुरुमंगम” में बहुत ही खूबसूरती से करते हैं। यह प्रयोग भी नाट्यशास्त्र के अनुकूलन में ही होता है। नाट्यशास्त्र में मंच पर मृत्यु/लाश को दिखाना निषेध है, जब कि भास के पाठ में मृत्यु मंच पर अपने यथाार्थ के साथ उपस्थित है। इस एकांगी के अंत में जब दूरी हुई जाय साले दुर्वीरन के गृधि पर फिर जाने के बाद, यह रहे अभी दुर्वीरन मरा नहीं है, पणिकर ने जीवित दुर्वीरन के समान एक धम्म/मृतात्मा दुर्वीरन को खड़ा कर दिया है। दोनों में संगत भी होता है। फिर धीरे-धीरे जमीन से धम्म/प्रेत मूल जीवित दुर्वीरन को ढकते हुए खड़ा होता है और असली दुर्वीरन स्वर्ग से आए हुए दूरी के रूप पर सवार हो प्रसन्नविद्य मुद्रा में स्वर्ग चला जाता है।</p> <p>• बैसनाथ डिग्री कॉलेज तालगंज, रायबरेली</p>		
84	Name of the Author	Dr. B.K. Bhardwaj	
Title of the Paper/Vol./No./ Page	Importance of sports medicine to cure sports injuries		
Department of the Teacher	Physical Education		
Name of the Journal	International Journal of physical education and Sports Sciences		
Year of Publication	2017		
ISSN	2231-3745		
Link of the recognition in UGC enlistment of the Journal			

85	Name of the Author	Dr. Atul Singh
	Title of the Paper/Vol./No./ Page	Evaluation of new stories in Hindi criticism
	Department of the Teacher	Hindi
	Name of the Journal	Shodh Bharti
	Year of Publication	April 2017
	ISSN	2760-X790
	Link of the recognition in UGC enlistment of the Journal	
86	Name of the Author	Dr. Atul Singh
	Title of the Paper/Vol./No./ Page	Critical view of critics on Jaycee
	Department of the Teacher	Hindi
	Name of the Journal	Shodh Bharti
	Year of Publication	2017
	ISSN	2760-X790
	Link of the recognition in UGC enlistment of the Journal	



87	Name of the Author	Ramesh Chandra Yadav	
	Title of the Paper/Vol./No./ Page	"Work life Balance in working women, information technology: A Social Scientific Study." Page no. 12-22	
	Department of the Teacher	Sociology	
	Name of the Journal	Mangalam (Half yearly Journal of Humanities & Social Sciences)	
	Year of Publication	2017	
	ISSN	0976-8149	
	Link of the recognition in UGC enlistment of the Journal		
88	Name of the Author	Dr. Surjan Yadav	
	Title of the Paper/Vol./No./ Page	Gandhi's "Gram Swaraj": The basis of rural empowerment	
	Department of the Teacher	Philosophy	
	Name of the Journal	Shodh Prerak	
	Year of Publication	2017	
	ISSN	2231-413X	
	Link of the recognition in UGC enlistment of the Journal		

89	Name of the Author	Dr. Surjan Yadav	<p style="text-align: center;">'हिन्द स्वराज' का दर्शन</p> <p style="text-align: right;"><i>सुरजन यादव *</i></p> <p>हिन्द स्वराज महात्म्य गांधी द्वारा लिखित एक छोटी सी पुस्तक है जो अपने समय में औपनिवेशिक अल्पसंख्यता के विरोध में लिखी गई। 1909 में इंग्लैंड से प्रकाशित की गई यह पुस्तक, एसाइस क्लबों के विरोध पर उन्होंने दूरी संताप के रूप में लिखा। हिन्द स्वराज के महत्त्व को गांधी सामाजिक विचारों को जन्म दे रहे हैं जहाँ मूल चतुर्दश संस्थाओं की संस्थाओं को हुए एक ऐसी संस्था की संकल्पना करना है जहाँ धर्म की स्थापना हो, ध्यान रहे यह धर्म स्वयं का धर्म न होकर सभी धर्मों के मूल में निहित नैतिक व्यवस्था का है। उनको कहती हैं, "मुझे तो धर्म प्यारा है इसलिए पहला दुष्ट उसे यह है कि हिन्दुस्तान परंपरागत होता जा रहा है। धर्म का अर्थ मैं यही हिन्दु, मुस्लिम या जैनोंवासी धर्म नहीं करता। लेकिन इन सब धर्मों के अंदर जो धर्म है वह हिन्दुस्तान से जो रहा है....." हिन्द स्वराज गांधी के राजनीतिक दर्शन का स्पष्ट विवेक है। हिन्द स्वराज में सामान्य प्रश्नों के उत्तरों में पश्चिमी अल्पसंख्यता की महती भीमता की गई है। पर महत्वपूर्ण यह है कि गांधी विचारों को अल्पसंख्यता तक सीमित नहीं करते अपितु इस अल्पसंख्यता को समाज बनने के लिए एक वैकल्पिक संस्था की प्रस्तावना भी बनाते हैं।</p> <p>अपनी इस पुस्तक को विभिन्न अवसरों पर गांधी ने जो ध्यान व्यक्त किए हैं वह एक सफल सामाजिक व सरल रूप में उस समाज की व्यवस्था के महत्वपूर्ण तत्वों को बिना न मानव का कल्याण हो सकता है और न ही मानव प्रगति को व्यक्त किया जा सकता है। तथा जिन सबके बिना वर्तमान लोकतांत्रिक एवं समाजवादी व्यवस्था चल सकती हो या एक विचारवादी रूप में आलोचना को व्यक्त किया है। इसमें, पीढ़ियां, पत्रकार, डॉक्टर, खेती, देल वैज्ञानिक खोजों की आलोचना के साथ सबसे महत्वपूर्ण लोकतांत्रिक आधार संवाद पर सीमा कक्षा किया है। इनके इन आलोचनाओं में देखा गया है कि यह सिर्फ आलोचना मात्र ही नहीं है अपितु इनका स्पष्ट विवेकन भी प्राप्त होता है। इन आलोचनाओं को भाषा बड़ी सरल, सामान्य भाषा को समाज को यह व्यवहारिक तर्कोंकता के साथ है। कहने का तात्पर्य गांधी की हिन्द स्वराज की आलोचना प्रवृत्तिपूर्णता व्यवहारिक सोचानों पर आधारित है। जिसमें जो-जो चीजें वास्तविक दुष्ट ही नहीं होता अपितु उदाहरणों आदि से इनकी मुद्रि भी करते हैं।</p> <p>हिन्द स्वराज को पहले अख्यार 'कॉन्ट्रिब्यूटिव और उसके कर्ता-धर्म' में गांधी ने इनको (संवेदन) को छाप उठाया था आलोचकों का जवाब भी दिया है। और इनके एक व्यक्ति द्वारा गांधी नीतियों का जिनकी आलोचना का का युवा जवाब करता था कि देन को स्पष्ट किया जिसमें समझने बताया है कि इनके यहाँ का धर्म किस प्रकार से मिशन के लिए सामाजिक हो रहा है और इन अपनी मूल्यों को भी निरूप नहीं था रहे हैं कि, उपयोगिता का बखान किया है। इसमें महत्त्व से बताया जाती है कि इनके मिशन के वास्तविक चरित्र को उजागर होने के बाद इनका राष्ट्रीय आन्दोलन में किस प्रकार की गतिशीलता को प्राप्त किया। इसी अख्यार में गांधी ने नैतिकता के लिए कहा जो कि आज की वर्तमान व्यवस्था में प्यारा दुष्ट हो गई है। वह अपनी मूल चरित्र चेतना को खो रही है। सिर्फ व्यवसायिकता को प्राप्त है, जो कि एक दुष्ट व्यवस्था प्रस्तुत करते हैं। वे कहती हैं- "अबतक का एक काम तो है लोगों की भावनाएँ जानना और उन्हें जाहिर करना, दूसरा काम है लोगों में अमुह - जरूरी भावनाएँ पैदा करना और, तीसरा काम है लोगों में सौध हो जो-जो चाहें विचारों मुतीकत आने पर भी वे धकक होकर उन्हें धिखाना।" इसी अख्यार में वे नीतियों के चरित्र द्वारा यह बताते हैं कि प्रयास करते हैं कि हमें किसी व्यक्ति का मुताबिक सामाजिक उपयोगिता के आधार पर नहीं करना चाहिए अपितु उसके अतीत के लिए गए देन पर भी विचार करना चाहिए साथ ही धर्म परिवर्तियों पर एक नजर भी देना चाहिए जिनमें रहकर उसमें कार्य किया है जब कहते हैं कि "जिस सौधी से हम ऊपर चढ़े उसको सात न मानने में ही बुद्धिमानी है" तो यह इससे व्यवहारिक की परख की घेतना का सीख मिलता है। कहने का</p> <p style="text-align: right;">3/6</p>
Title of the Paper/Vol./No./ Page	"Hind Swaraj" Ka Darshan		
Department of the Teacher	Philosophy		
Name of the Journal	Annals of Multi-Disciplinary Research		
Year of Publication	2017		
ISSN	2249-8893		
Link of the recognition in UGC enlistment of the Journal			
90	Name of the Author	Dr. Surjan Yadav	<p style="text-align: center;">वर्णव्यवस्था और गांधी</p> <p style="text-align: right;"><i>सुरजन यादव *</i></p> <p>34- Vol.VI, July to September, 2017, No.3, ISSN 2393-8285 Impact Factor 2.897</p> <p>वर्णव्यवस्था प्राचीन भारत में उन शास्त्रों में एक है जिनकी स्थापना नैतिक और आध्यात्मिक उपलक्षियों के लिए की गयी थी। प्राचीन भारत में वर्ण व्यवस्था को अत्यंत महत्व, शक्ति, वैभव और सुख के रूप में माना जाता था। वर्ण व्यवस्था का अर्थ है, जिसका अर्थ है कि, समाज में व्याप्त असमानता, सामाजिक और सामाजिक की भावना थी। इस भावना के अनुसार वर्ण व्यवस्था को स्थापित करने के लिए-कारणों तथा उसकी सामाजिक स्थिति का निर्णय हो जाता था। महात्मा गांधी जी इनकी परिधि में अपने वर्ण व्यवस्था सम्बन्धी विचारों को व्यक्त किया है। गांधी जी ने वर्णव्यवस्था में स्वतंत्रता और सामाजिक कर्तव्यपरंपरा का समर्थन देखा है। महात्मा गांधी वर्णव्यवस्था और धर्म का अर्थ बताते हुए कहते हैं कि 'मुझे हिन्दू धर्म का जो ज्ञान है उसके आधार पर मैं कह सकता हूँ कि धर्म का अर्थ अथवा सरल है। इसका सीधा-सादा अर्थ है कि हम सब अपने-अपने पूर्वजों का परम्परागत व्यवहार को धर्म ही मानते हैं, अगर यह वैश्व धर्म मूल नैतिक धर्म से असंगत न हो। आप अग्रणी कहें कि यदि हम सब इस वर्ण धर्म का पालन करें तो हमारी नैतिक महत्त्वकांक्षाएँ, गर्वितता हो जायेगी और हमारी नैतिक धर्म विचारों के अर्थों के लिए मुझ को 'जयेंगी, जिनसे और जिनके द्वारा हमें ईश्वर का ज्ञान प्राप्त हो सकता है।'</p> <p>वर्ण व्यवस्था को धर्म को व्यावहारिक अथवा शिवात्मक धर्म को अर्थात् रखा जा सकता है। इसलिए इसे धर्म के रूप में स्वीकार करते हैं। धर्म की आवश्यकता आध्यात्मिक जिज्ञासा को शांत करने और ईश्वर साक्षात्कार के लिए धर्म का पालन किया जाय तो इन दोनों लक्ष्यों की प्राप्ति हो जाती है गांधी जी ने विश्वास पूर्वक कहा है "जैसे-जैसे साल पर साल बीतते जाते हैं वेद विश्वास बढ़ता जाता है कि धर्म धर्म ही मनुष्य का जीवन धर्म है।" धर्म धर्म में किसी प्रकार की ऊँचा-नीच की भावना नहीं है। कोई भी नैतिकतापूर्ण कार्य जोड़ा या करेगा नहीं होता और उसको करने वाला ऊँच या नीच नहीं होता। वास्तविक रूप से विश्वास किया जाय तो वादा जा सकता है वर्णव्यवस्था का प्रत्यक्ष अर्थ ही भारतीय परम्परा पर आधारित है और वेदनात्मक तथा धर्म के अर्थ में परे है। मानव मात्र समाज है तथापि सामाजिक आवश्यकताओं की पूर्ति के लिए 'व्यवस्था' को धर्म के अर्थ में अर्थव्यवस्था अथवा व्यवस्था को अर्थ में रखा गया।</p> <p>ऊँच-नीच की भावना को ऊपर उठकर जिस वर्णव्यवस्था को मान्यता मिली वह जाति प्रथा की नीति स्वार्थ पर नहीं, बल्कि सेवा, समता, स्नेह और सहयोग पर आधारित थी। इस दृष्टि से यह विचारों की देश और काल के लिए उपयोगी हो सकता है। इसलिए गांधी जी वर्णव्यवस्था पर अधिक बल देते हैं और कहते हैं-वर्ण व्यवस्था में धर्म है। अधिकार नहीं। इसलिए धर्म का अर्थव्यवस्था को धर्म के लिए ही हो सकता है, स्वार्थ को लिए नहीं। इसी कारण न तो कोई अर्थव्यवस्था सेवा के लिए ही हो सकता है, स्वार्थ को लिए नहीं। इसलिए धर्म को धर्म ही मानना है। वर्णव्यवस्था को अर्थव्यवस्था से धर्म, धर्मव्यवस्था ही होता है। यहाँ यह भी माना जाय आवश्यक है कि वर्णव्यवस्था में ऐसी कोई बात नहीं है कि शुद्ध ज्ञान का संचय अथवा राष्ट्र की रक्षा न करे। ही शुद्ध ज्ञान को विनिमय को अथवा राष्ट्र रक्षा को अपनी आजीविका का साधन न बना ले। महात्मा अथवा शक्ति न करे, यह भी बात नहीं है। परन्तु परिधि के द्वारा आजीविका न बलायें। इस साहज सामाजिक धर्म का यदि संस्था पालन किया जाय तो समाज में जो उपदेव</p> <p style="text-align: right;">*शोध-छात्र दर्शन एवं धर्म विभाग, काशी हिन्दू विश्वविद्यालय, वाराणसी-221005</p>
Title of the Paper/Vol./No./ Page	Varnvyastha aur Gandhi		
Department of the Teacher	Philosophy		
Name of the Journal	Journal of Humanities and Culture		
Year of Publication	2017		
ISSN	2393-8285		
Link of the recognition in UGC enlistment of the Journal			

91	Name of the Author	Dr. Surjan Yadav
	Title of the Paper/Vol./No./ Page	"The concept of selfless action in Geeta
	Department of the Teacher	Philosophy
	Name of the Journal	Asian Journal of Advance Studies
	Year of Publication	2017
	ISSN	2395-4965
	Link of the recognition in UGC enlistment of the Journal	

Vol.3, Asian Journal of Advance Studies 2017, No.3, ISSN 2395-4965 :149

गीता में निष्कर्म कर्म की अवधारणा
सुरजन यादव

विद्यापूर्वक अपने सामाजिक कर्तव्यों का पालन करना कर्मयोग कहलाता है। गीता कर्मयोग के प्रथम में प्रत्येक व्यक्ति को यह आग्रह करती है कि वह अपने वर्णगत कर्तव्यों का तथा इन सामाजिक कर्तव्यों का विद्यापूर्वक पालन करे, जो समाज में एकता लाने तथा एकता को बनाए रखने के लिए सहाय प्रयत्न है। गीता कर्म पर बत देती है। वास्तव में कर्म करना मनुष्य का स्वभाव है। कोई भी मनुष्य मत्वर के लिए अपने कर्मों का परित्याग नहीं कर सकता। कर्म न करने का अर्थ ही निष्कर्म नहीं है। गीता स्वयं ही कि कोई भी व्यक्ति अपने कर्मों का परित्याग करना चाहे, तो ऐसा करना सम्भव नहीं है। मानव शरीर की दृष्टिगत कोई न कोई कर्म करनी रहती है। मनुष्य कर्म से रोग हुआ है। प्रकृति के त्रिगुण, सा, राज मनुष्य को कर्म करने की प्रेरणा देते रहते हैं। गीता कहती है कि कर्म के अभाव में निर्गम भी असम्भव है। यदि लोग कर्म करना बन्द कर दे, तो बुद्धि चक्र रुक जायेगा।

“न हि कश्चित्कालं नन्दे जातु विदुष्वकर्मणाम्।
कर्मणि इवमत्र कर्म सर्वः प्रकृतिजैर्मुनिः।”

नित्यवैद कोर्द भी मनुष्य किसी भी काल में क्षणमात्र भी बिना कर्म किये नहीं रहता, क्योंकि सारा मनुष्य समुदाय प्रकृति जन्मि द्वारा प्रयत्न द्वारा कर्म करने के लिए बाध्य किया जाता है।

मर्यादित जीवन में शान तथा भावना के अभाव में कर्म का बड़ा महत्वपूर्ण स्थान है। गीता कर्म के द्वारा ही मोक्ष की प्राप्ति सम्भव मानती है। बल्कि यदि वह कहा जाय कि गीता कर्म को कुछ अधिक ही महत्व देती है। अर्जुन प्रारम्भ में तो कुछ जाने से विस्मृत हो मना करता है, किन्तु श्री कृष्ण को समझाने पर वह अंत में स्वयं ही कहता है-
“ममते मोक्षः स्मृतिर्लभ्या त्वत्परादात्मामयाहृतः।
सिवात्सर्वस्य परा सन्देशः कर्मिणे चर्चनं तव।”

अर्थात् हे श्री कृष्ण आपकी कृपा से हमारा मोक्ष-तोष सब समाप्त हो गया है और मैंने अब अपनी स्मृति को प्राप्त कर लिया है, अब मैं संशय रहित हूँ और आपके आज्ञा का पालन करने को तैयार हूँ।

इस प्रकार से अर्जुन कर्म करने को तैयार हो जाता है। और गीता का उद्देश्य भी तो यही है कि मनुष्य यह जाने की उसका धर्म ही है कर्म करना परन्तु यह कर्म निश्चय ही स्वयं रहित होना चाहिए।

गीता का कर्मयोग निष्कर्म कर्मयोग है। गीता निष्कर्म भाव से कर्म करने की प्रेरणा देती है। यही निष्कर्म कर्म करने का अर्थ है कर्म को सर्व्वे सायु रूप में देखना चाहिए और उसे अपने सिद्धि का साधन तो अभी नहीं समझना चाहिए। इसके बरतने का तात्पर्य है कि हम कर्म को करते रहे परन्तु फल की इच्छा कभी भी मन में नहीं रखनी चाहिए। गीता में पर्यंत-है कि “पैरा कर्म करने में ही अधिकार है, उसके फल तो न कभी नही। इसलिए तू कर्मों के फल का इच्छा मत रख केवल अपने कर्म को करो।”

इस प्रकार से गीता में निष्कर्म कर्म की शिक्षा दी गई है और कहा गया है कि निष्कर्म कर्म करने वाला व्यक्ति दुःख के निकट होता है। कर्म को ही केवल अपना साधन मानकर कर्मों को निभाया जाय, उसने किसी प्रकार की भी भेदा नहीं होनी चाहिए। गीता के अनुसार

“सोम-छात्र दर्शन एव धर्म विद्याम कारी हिन्दु विरहिवालयत यारनती

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92	Name of the Author	Dr. B.K. Bhardwaj
	Title of the Paper/Vol./No./ Page	Physical education, Infrastructure facilities of sports medicine, yoga and health as developmental paraphernalia in modern India
	Department of the Teacher	Physical Education
	Name of the Journal	International Journal of physical education and Sports Sciences
	Year of Publication	2017
	ISSN	2231-3745
	Link of the recognition in UGC enlistment of the Journal	

International Journal of Physical Education and Sports Sciences
Vol. 11, Issue No. 03, April-2017, ISSN 2231-3745

Physical Education, Infrastructure Facilities of Sports, Sports Medicine, Yoga and Health as Developmental Paraphernalia in Modern India

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Abstract - Recreation and mass sports are exceptionally critical both socially and financially. Physical exercises aid in shaping a healthier society. Attitudes and capacities created by sport advances people's prosperity and significantly enhance their physical, mental and martial recreation along these lines creating better personal satisfaction. The condition of health of the workforce is a more continuous inquiry in created and creating economies however for the most part in the modern India. Inquires about demonstrate that the individuals who are more dynamic physically can perform better at their work and are more productive in their jobs. Besides, it might be influenced by the offices, infrastructure like are more productive in their jobs. Besides, it might be influenced by the offices, infrastructure like are more productive in their jobs. Besides, it might be influenced by the offices, infrastructure like are more productive in their jobs. Besides, it might be influenced by the offices, infrastructure like are more productive in their jobs. Besides, it might be influenced by the offices, infrastructure like are more productive in their jobs.

Keywords: Physical Education, Sport infrastructure, Yoga, Sports Medicine

1. INTRODUCTION

Ideal level of health and fitness is the necessity of the day and need to keep health and general fitness. The aim of every sportsman is a best class competitor. At that point what is about the rest one needs to think about the issue at hand. If the above motto is to be kept (unbreakable). Physical education manages extremely resistant gathering of populace. It takes into account the requirements of younger generation that the most part are dependably there in recreation and sports and physical education exercises. Through yoga health can be limited all things considered. All physical education exercises are body contact recreation and in view of dynamic development.

Because of that every one of the muscles stays in a contracted condition, and for that the competitors stay in a strained condition. Also, the muscles are abbreviated. Because of that the competitors stay in strained condition and experience the ill effects of different ailments over the long haul. To wipe out such condition, they should hone the stretching of muscles. An agam, without, have a portion of the yoga practices are specified underneath to extend the muscles viably and gets ready for the days to come. All things considered, it diminishes the likelihood of muscle and tendon injuries (Mansari, 2014)

Yoga for the fit of sports injuries. The strength of muscles could be advanced through Asana. There is an awesome need of training the harmed sportsman as well as the goal that they can continue indeed in their sports at the shortest. Hence, there is a need to think and focus on this issue with the goal that they recover rapidly from injuries and take an interest in the recreation and sports indeed. With the aid of asanas, meditation and sports indeed. Today, everybody has acknowledged that the extending standard works better for unwinding.

Yoga for the advancement of sports. For the advancement of sports capacity, yoga has a gigantic part to play. The critical standards like (i) Endurance, (ii) non-muscular co-appointment, (iii) martial planning are basically required in any sports and physical education exercises. There were number of competitions done in the past on these territory demonstrating the utility of yoga practices in the different part of health and fitness.

The education belief system of a healthy society is by an accounts of somewhat unpredictable and multifaceted issue, in which heaps of individual, societal, economic and social elements assume a part. The fundamental connection amongst sports and economy that is the reason requires significantly

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93	Name of the Author	Dr. B.K. Bhardwaj
	Title of the Paper/Vol./No./ Page	Analysis of balance diet for sportsperson
	Department of the Teacher	Physical Education
	Name of the Journal	International Journal of physical education and Sports Sciences
	Year of Publication	2017
	ISSN	2230-7540
	Link of the recognition in UGC enlistment of the Journal	

Journal of Advances and Scientific Researches in Allied Education
Vol. 10, Issue No. 1, October-2017, ISSN 2230-1540

Analysis on Balance Diet for Sports Person

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Abstract - The paper is featuring the Nutrition Role in Sports execution and Fitness and this is the assessment of, sustenance and supplements and their effect on wellbeing, improvement, and progression of the single individual. Recreational Nutrition applies sustenance Diets/recipes to meet with the objective of extending show. Assessments recognized wellness incorporation capacities that are indispensable for diverse show.

Keywords - Nourishment, Nutrition's, Adjust Eat Less

1. INTRODUCTION

Games sustenance is a specialization inside the field of nourishment that incorporates interaction with the investigation of the human body and exercise science (Wilfly, 2018). Games nutrition can be characterized as the use of nourishment learning to a down-to-earth way by day-eating design giving the fuel to physical movement, encouraging the repair and building process following hard physical work and completing athletic execution in aggressive occasions, while additionally advocating general wellbeing and health. The fundamental idea for sports sustenance for competitors requires legitimate eating procedures and need a summary of general nourishment and additional practice science. The second step is to pick up the learning of how nourishment and exercise science are interrelated, understand the physical preparing and dietary preparations are dependent on each other with a specific aim goal to create ideal execution. (US Department of Health and Human Services, 2003). The last objective is the reasonable utilization of game sustenance learning to the individual games individual who is taking an interest in any game or physical action (Corgers & Miller, 2003).

Adjustments sustenance assumes fundamental importance in light of the way that well before practicality, interaction and preparing to be successful, interaction and preparing to be practical display rate. It won't not be sensible to think with regard to nutrition should keep the blood vessels in connection with a specific aim goal to create ideal execution. (US Department of Health and Human Services, 2003). The last objective is the reasonable utilization of game sustenance learning to the individual games individual who is taking an interest in any game or physical action (Corgers & Miller, 2003).

The expansion of sustenance in connection to sports execution has advanced from observational examinations researching the impact of dietary control, for example, carbohydrate and supplementation to the methodical examination of physiological premise of the particular substance requires for hard physical exercise (9). The principle part of game nutrition is to help the preparation program. Dietary admission for execution will change as the preparation administration changes. Poor nourishment can prompt damage, exhaustion and can run with reference to how effectively a competitor performs (14). American Diabetic Association, Dietician of Canada and American College of Sports Medicine expressed that physical movement, athletic execution and recuperation from practice are upgraded by ideal nourishment. Fitting choice of sustenance and liquids, timing of admission and supplement decisions are required for ideal wellbeing and exercise execution (Prochaska & Velicer, 1987).

2. REVIEW OF LITERATURE

The part of sustenance in sports execution is critical. Appropriate sustenance must be accessible earlier, ample and post-rival. Creamy and leaner meat expressed that from power to recuperation, muscle building weight and influencing diet nourishment is important the best stage for accomplishment in any game (B.O). Supporter eaten after and before the activity are the most essential as sustenance yet as should be extremely cautious with all that the competitor eats in his body. When in doubt of found a competitor ought to eat around two hours previously any activity and the dinner to be high in sugars, low in fat and low in starch in protein. Starches are the fundamental walking of vitality that gives capacity to a competitor in practice administration. Protein is required to create muscle development.

Dr. B. K. Bhardwaj*

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94	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Homogeneous Catalytic Oxidation of some Polyhydric Alcohols by Iridium Trichloride, 3(1), 19-24
	Department of the Teacher	Chemistry
	Name of the Journal	Chemistry International
	Year of Publication	2017
	ISSN	2410-9649
	Link of the recognition in UGC enlistment of the Journal	

Chemistry International 3(1) (2017) 19-24

International Scientific Organization
http://iscientific.org/
Chemistry International
www.bosaljournals.com/chemint/

Homogeneous catalytic oxidation of some polyhydric alcohols by iridium trichloride

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Chemical Laboratories, Feroze Gandhi College, Rae Bareilly - 225001, U.P. India
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ARTICLE INFO

Article type: Research article
Article history: Received January 2016; Accepted March 2016; January 2017 Issue.
Keywords: Homogeneous Oxidation, NBS, Acidic Catalysis, Iridium(III)

ABSTRACT

The kinetic investigation for catalyzed oxidation of D-sorbitol and glycerol using Ir(III) in an acidified solution of NBS in the presence of Hg(OAc)₂ as a scavenger for bromide ion has been carried out in the temperature range of 30°-45° C. First order kinetics in the lower NBS concentration range resulted to zero order at higher concentration, because in concentration of Cl⁻ and H⁺ showed fractional inverse order while the order of reaction w.r.t. substrate was zero. Negligible effect of Hg(OAc)₂ and ionic strength of the medium was observed. A suitable mechanism in conformity with the kinetic observations has been proposed and the various activation parameters have been calculated.

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Capable Summary: The kinetics of D-sorbitol and glycerol oxidation using Ir(III) in an acidified solution of NBS in the presence of Hg(OAc)₂ in the temperature range of 30°-45° C were investigated and Cl⁻ and H⁺ showed significant effect, whereas Hg(OAc)₂ and ionic strength effect was negligible.

Cite This Article As: Srivastava, S., Srivastava, F., Gupta and A. Jaiswal. Homogeneous catalytic oxidation of some polyhydric alcohols by iridium trichloride. Chemistry International 3(1) (2017) 19-24.

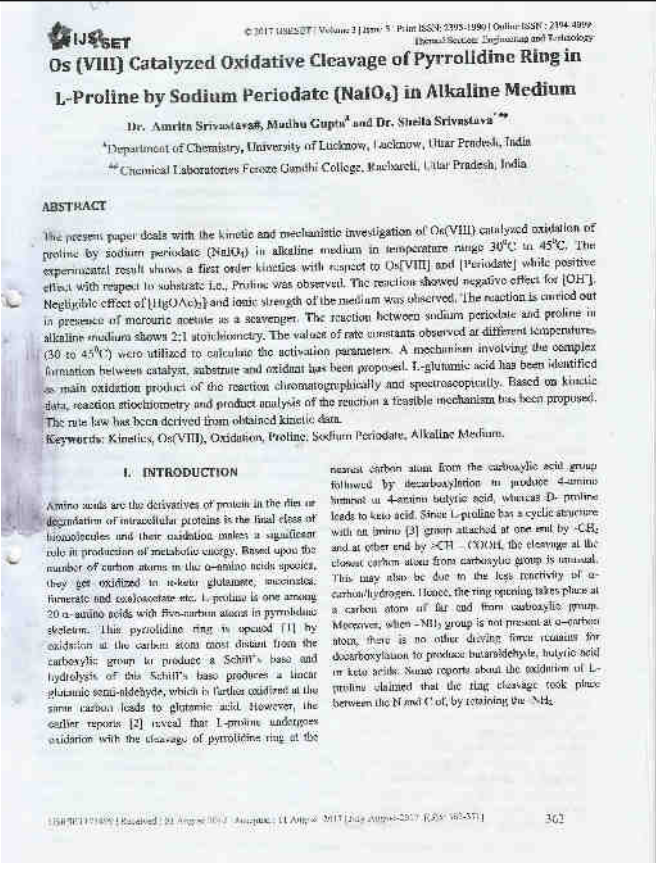
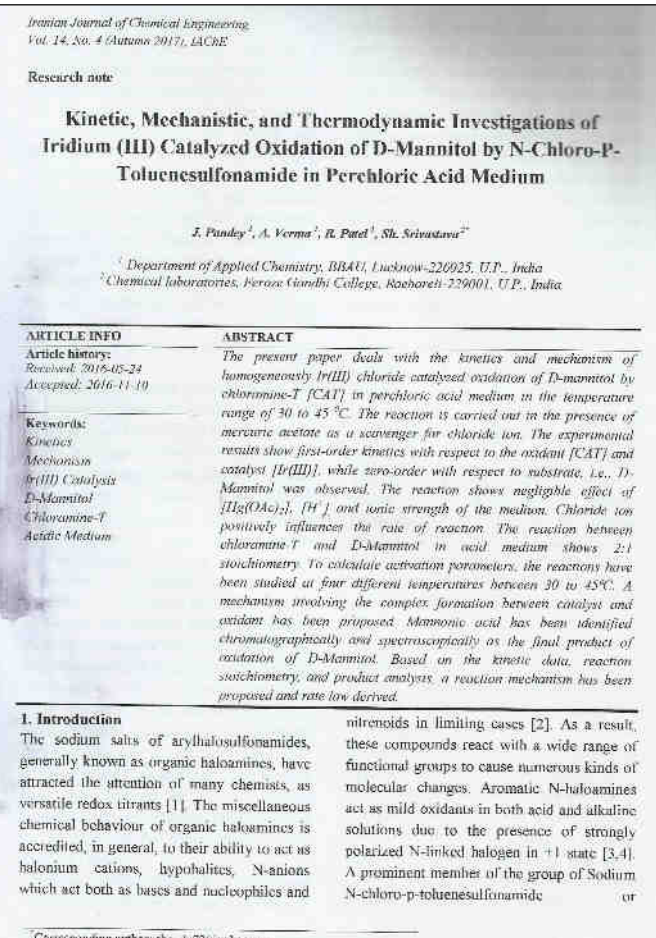
INTRODUCTION

N-bromosuccinimide (NBS) has been used as a brominating and oxidizing agent in synthetic organic chemistry as well as analytical reagent especially in acid medium (Vilce, 1963; Kamble et al., 1996a; Mathur and Narang, 1975; Saroja et al., 1999). Recently, NBS has been used for the bromination of some selected organic substrates in which it is used as source for bromine in radical reactions (such as allylic brominations) and various electrophilic additions. The NBS reaction with organic substrates such as alcohols and amines leads to the products of net oxidation followed by elimination of HBr (Huang and Fu, 2006; Maruderi et al., 2004; Shao and Shi, 2005). During the past few decades, there has been an upsurge in the designing of a variety of catalysts to explore their utility in synthetic organic chemistry. A number of transition and platinum group metal ions and their

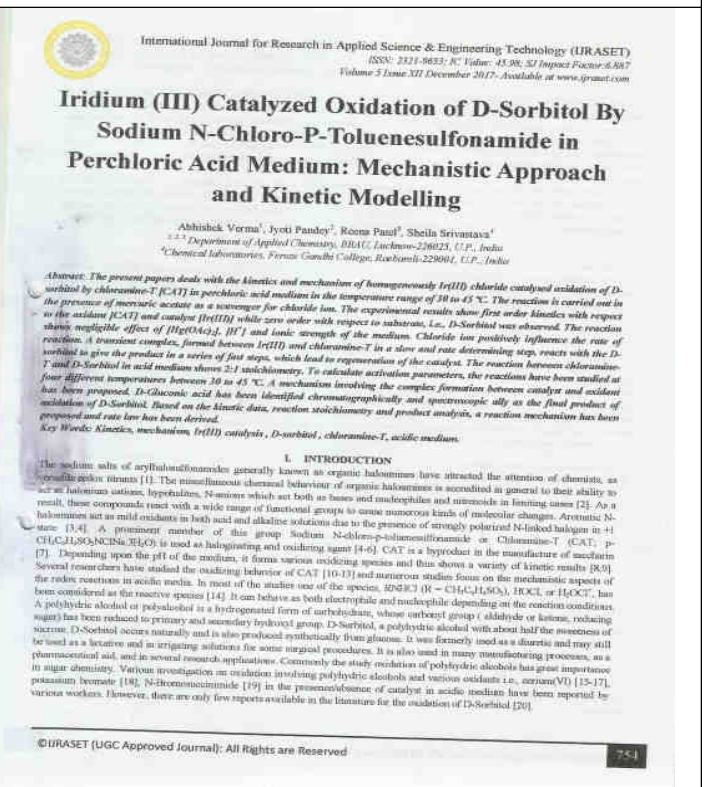
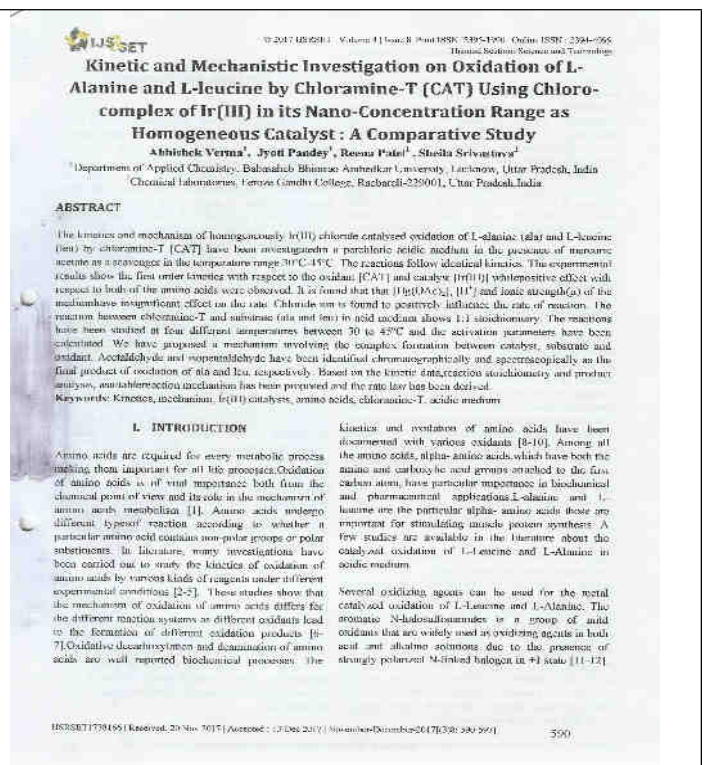
Scheme 1: Reaction polyhydric alcohol with NBS. Where R = C₂H₄(CHOH)₂ for D-Sorbitol and CH₂(OH)-CHOH for Glycerol respectively. The products were identified by TLC method (Fojit, 1996).

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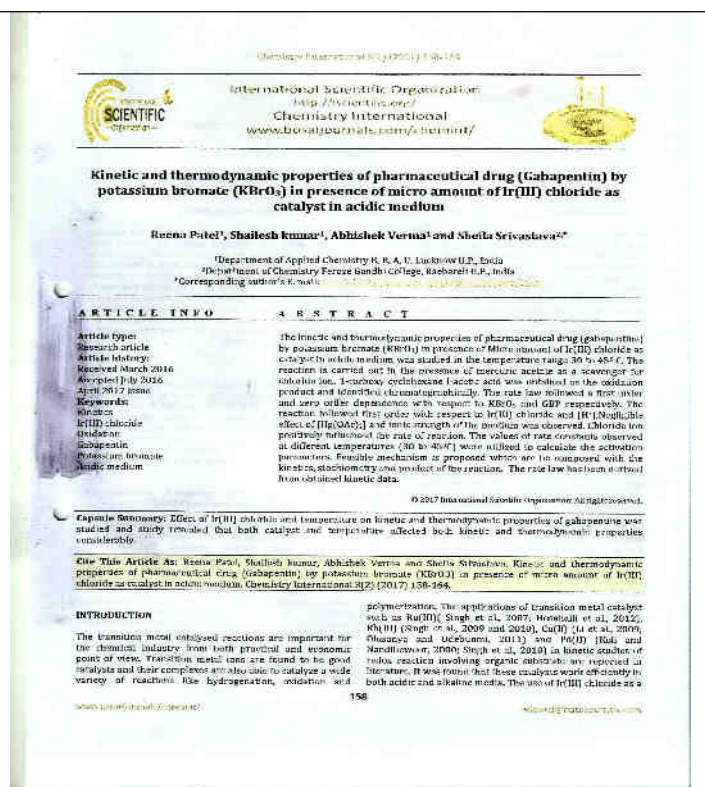
95	Name of the Author	Sheila Srivastava	 <p>International Scientific Organization http://iscientific.org/ Chemistry International www.bosaljournals.com/chemint/</p> <p>Kinetic and thermodynamic study of Os(VIII) catalysed oxidation of glycine by ferrate(VI) in alkaline medium</p> <p>Sheila Srivastava* and Dharmraj Prajapati</p> <p>Department of Chemistry Fernus Gandhi College, Raebareilly U.P., India *Corresponding author's E. mail: she_sra72@yahoo.com</p> <p>ARTICLE INFO</p> <p>Article type: Research article Article history: Received January 2016 Accepted March 2016 January 2017 Issue Keywords: Ferrate (VI) Os(VIII) catalysis Oxidant Kinetics</p> <p>ABSTRACT</p> <p>Kinetic and thermodynamic investigation on Os(VIII) catalysed oxidation of glycine by ferrate(VI) has been done in basic medium and in the temperature range 30–45°C. Rate of oxidation increases with increase in $[FeO_4^{2-}]$ and $[Os(VI)]$ and shows first order dependence. Rate of oxidation also increases with the increase in $[S]$ but order is fractional. The rate decreases with an increase in pH. Rate of reaction is independent of $[KCl]$, $[NaNO_3]$ and change in ionic strength. The values of rate constant observed at four different temperatures were used to calculate the activation parameters. The energy of activation (E_a) of the reaction at pH 11 and temperature 35°C was found to be 49.56 kJ mol⁻¹. $[OsO_4(H_2O)_2]$ and $[FeO_4^{2-}]$ are proposed to be the reactive species of Os(VIII) and Fe(VI) respectively in the present investigation. Formaldehyde is found to be main product of the reaction along with carbon dioxide and ammonia as by products. On the basis of experimental findings, a suitable mechanism consistent with the observed kinetics is proposed and a rate law has been derived on the basis of obtained data.</p> <p>© 2017 International Scientific Organization. All rights reserved.</p> <p>Capsule Summary: Kinetic study of Os(VIII) catalysed oxidation of Glycine by ferrate(VI) in alkaline medium and in temperature in the range of 30 °C – 45 °C was done and formaldehyde was found to be the main product. Oxidant, $[FeO_4^{2-}]$ and $[Os(VIII)]$ showed first order kinetics, whereas $[Cl^-]$ and $[NO_3^-]$ showed negligible effect.</p> <p>Cite This Article As: S. Srivastava and D. Prajapati. Kinetic and thermodynamic study of Os(VIII) catalysed oxidation of glycine by ferrate(VI) in alkaline medium. Chemistry International 3(1) (2017) 32-38.</p> <p>INTRODUCTION</p> <p>Oxidation of α-amino acids is one of the most important biochemical reactions taking place in living beings. These include many important reactions such as oxidative metabolism, oxidative catabolism, oxidative deamination, Krebs Cycle etc. Besides these uncatalysed oxidation reaction of α-amino acids by range of oxidants are of particular concern in the field of medicine and biotechnology. Moreover, due to the presence of many highly toxic derivatives of amino acids in wastewater such as microcystins (a group of monocyclic heptapeptide hepatosis) produced by numerous freshwater cyanobacteria [Sharma, 2004], oxidation of such derivatives is also important. For treatment of wastewater bodies it is very necessary to remove off or oxidatively degrade the dissolved amino acids in waste water bodies. In recent years the kinetics and mechanism of amino acids have been studied by some researchers (Debra and Yadav, 2012; Goel et al., 2013; Srivastava et al., 2006, 2007ab; Srivastava and Gupta, 2006; Srivastava et al., 2013). However, the mechanism is different in different reaction systems. The oxidation of amino acids is also of</p> <p>www.bosaljournals.com/chemint/ 32 editor@bosaljournals.com</p>
	Title of the Paper/Vol./No./ Page	Kinetic and thermodynamic study of Os(VIII) catalysed oxidation of glycine by ferrate(VI) in alkaline medium, 3(1), 32-38	
	Department of the Teacher	Chemistry	
	Name of the Journal	Chemistry International	
	Year of Publication	2017	
	ISSN	2410-9649	
	Link of the recognition in UGC enlistment of the Journal		
96	Name of the Author	Sheila Srivastava	<p>Proc. Natl. Acad. Sci., India, Sect. A Phys. Sci. (April–June 2017) 87(2):163–170 DOI 10.1007/s40010-017-0355-8</p> <p>RESEARCH ARTICLE</p> <p>Iridium(III) Catalyzed Oxidation of Leucine by Chloramine-T in Acidic Medium: A Kinetic and Mechanistic Study</p> <p>Abhishhek Varma¹ · Jyoti Pandey¹ · Sheila Srivastava²</p> <p>Received: 9 February 2015 / Revised: 10 June 2015 / Accepted: 7 March 2017 / Published online: 28 March 2017 © The Author(s) 2017. This article is published with open access at Springerlink.com</p> <p>Abstract The present paper deals with the kinetics and mechanism of heterogeneous Ir(III) chloride catalyzed oxidation of Leucine by chloramine-T (CAT) in perchloric acidic medium in the temperature range 30–45 °C. The reaction is carried out in the presence of mercuric acetate as a scavenger for chloride ion. The experimental results show first order kinetics with respect to the oxidant (CAT) and catalyst $[Ir(III)]$ while positive effect with respect to substrate, i.e., Leucine was observed. The reaction shows negligible effect of $[Hg(OAc)_2]$, $[H^+]$ and ionic strength of the medium. Chloride ion positively influenced the rate of reaction. The various activation parameters were calculated from the rate measurements at different temperatures (30–45 °C). The reaction between chloramine-T and leucine in acid medium shows 1:1 stoichiometry. On the basis of kinetic studies, reaction stoichiometry and product analysis, a suitable mechanism has been proposed and rate law has been derived.</p> <p>Keywords Kinetics · Mechanism · Ir(III) catalysis · Leucine · Chloramine-T · Acidic medium</p> <p>1 Introduction</p> <p>The organic sulphanyl halamines (N-haloamines), a group of mild oxidizing agents, has been extensively used for the oxidation of several organic compounds due to its diverse behavior. The versatile nature of N-haloamines is attributed to the presence of halogen nature and nitrogen atoms at their structure, which can act as both a base and a nucleophile [1–3]. As a result, these compounds can react with a wide range of functional groups to cause numerous kind of molecular changes. Sodium N-chloro-p-toluenesulfonamide or Chloramine-T[®] (CAT; p-CH₃C₆H₄SO₂NCIN₂-H₂O) is one of the prime members of organic halo-amine family and behaves as an oxidizing agent in both acidic and alkaline media. Depending upon the pH of the medium, it forms various oxidizing species and thus shows a variety of kinetic results [6–9]. Several researchers have studied the oxidizing behavior of CAT [10–12] and numerous studies focus on the mechanistic aspects of the redox reactions in acidic media. In most of the studies one of the species, RNHCl (R = CH₃C₆H₄SO₂), HOCl, or H₂OCl⁺, has been considered as the reactive species [13]. It can behave as both electrophile and nucleophile depending on the reaction conditions.</p> <p>Oxidation of amino acid is of great interest due to their biological importance. Besides serving as the building blocks in protein synthesis, amino acids also play a significant role in metabolism. They can undergo numerous kinds of reaction depending on whether a particular amino acid contains any particular groups or polar substituents. Amino acids are used in variety of applications in biochemical research, microbiology, nutrition, pharmaceuticals and fortification of foods and feeds. Various researchers have studied the kinetics and mechanism of oxidation of amino acids [14, 15]. However, the mechanism differs for</p> <p>59 Sheila Srivastava she_sra72@yahoo.com</p> <p>¹ Department of Applied Chemistry, BBAM, Lucknow, U.P., 226025, India</p> <p>² Chemical Laboratories, Fernus Gandhi College, Raebareilly, U.P., 223001, India</p> <p>Springer</p>
	Title of the Paper/Vol./No./ Page	Iridium(III) catalyzed Oxidation of Leucine by Chloramine-T in Acidic Medium : A Kinetic and Mechanistic Study 87(2), 163-170	
	Department of the Teacher	Chemistry	
	Name of the Journal	Proc. Natl. Acad. Sci., India, Sect. A, Phys. Sci.	
	Year of Publication	2017	
	ISSN	0369-8203	
	Link of the recognition in UGC enlistment of the Journal		

97	Name of the Author	Sheila Srivastava	 <p>IJSRSET © 2017 IJSRSET Volume 3 Issue 5 Print ISSN: 2395-1990 Online ISSN: 2394-4999 Department of Chemistry, University of Lucknow, Lucknow, Uttar Pradesh, India</p> <p>Os (VIII) Catalyzed Oxidative Cleavage of Pyrrolidine Ring in L-Proline by Sodium Periodate (NaIO₄) in Alkaline Medium</p> <p>Dr. Amrita Srivastava¹, Madhu Gupta¹ and Dr. Sheila Srivastava^{2*}</p> <p>¹Department of Chemistry, University of Lucknow, Lucknow, Uttar Pradesh, India ²Chemical Laboratories Feroze Gandhi College, Raebareilly, Uttar Pradesh, India</p> <p>ABSTRACT</p> <p>The present paper deals with the kinetic and mechanistic investigation of Os(VIII) catalyzed oxidation of proline by sodium periodate (NaIO₄) in alkaline medium in temperature range 30°C to 45°C. The experimental result shows a first order kinetics with respect to Os(VIII) and [Periodate] while positive effect with respect to substrate i.e., Proline was observed. The reaction showed negative effect for [OH⁻], Negligible effect of [Hg(OAc)₂] and ionic strength of the medium was observed. The reaction is carried out in presence of mercuric acetate as a scavenger. The reaction between sodium periodate and proline in alkaline medium shows 2:1 stoichiometry. The values of rate constants observed at different temperatures (30 to 45°C) were utilized to calculate the activation parameters. A mechanism involving the complex formation between catalyst, substrate and oxidant has been proposed. L-glutamic acid has been identified as main oxidation product of the reaction chromatographically and spectroscopically. Based on kinetic data, reaction stoichiometry and product analysis of the reaction a feasible mechanism has been proposed. The rate law has been derived from obtained kinetic data.</p> <p>Keywords: Kinetics, Os(VIII), Oxidation, Proline, Sodium Periodate, Alkaline Medium.</p> <p>1. INTRODUCTION</p> <p>Amino acids are the derivatives of proteins in the diet or degradation of intracellular proteins is the final class of biomolecules and their oxidation implies a significant role in production of metabolic energy. Based upon the number of carbon atoms in the α-amino acids species, they get oxidized in various glutamate, aspartate, fumarate and oxalosuccinate etc. L-proline is one among 20 α-amino acids with five-carbon atoms in pyrrolidine skeleton. This pyrrolidine ring is opened [1] by oxidation at the carbon atom most distant from the carboxylic group to produce a Schiff's base and hydrolysis of this Schiff's base produces a linear glutamic semi-aldehyde, which is further oxidized at the same carbon leads to glutamic acid. However, the earlier reports [2] reveal that L-proline undergoes oxidation with the cleavage of pyrrolidine ring at the nearest carbon atom from the carboxylic acid group followed by decarboxylation to produce α-amino-ketone or 4-oxo-pyrrolidine. Since L-proline has a cyclic structure with an amino [3] group attached at one end by -CH₂ and at other end by -CH₂-COOH, the cleavage at the closest carbon atom from carboxylic group is unusual. This may also be due to the less reactivity of α-carbon/hydrogen. Hence, the ring opening takes place at a carbon atom of far end from carboxylic group. Moreover, when -NH₂ group is not present at α-carbon atom, there is no other driving force present for decarboxylation to produce butanaldehyde, butyric acid in keto acids. Some reports about the oxidation of L-proline claimed that the ring cleavage took place between the N and C of, by retaining the -NH₂.</p> <p>IJSRSET170501 Received: 23 Aug 2017 Accepted: 11 Aug 2017 Published Online: 2017 ISSN: 2394-4999 362</p>
Title of the Paper/Vol./No./ Page	Os(VIII) catalyzed oxidative cleavage of Pyrrolidine Ring in L-Proline by Sodium Periodate in Alkaline Medium.,3(5), 362-371		
Department of the Teacher	Chemistry		
Name of the Journal	IJSRSET		
Year of Publication	2017		
ISSN	2395-1990		
Link of the recognition in UGC enlistment of the Journal			
98	Name of the Author	Sheila Srivastava	 <p><i>Iranian Journal of Chemical Engineering</i> Vol. 14, No. 4 (Autumn 2017), IJACE</p> <p>Research note</p> <p>Kinetic, Mechanistic, and Thermodynamic Investigations of Iridium (III) Catalyzed Oxidation of D-Mannitol by N-Chloro-P-Toluenesulfonamide in Perchloric Acid Medium</p> <p>J. Pandey¹, A. Verma², R. Patel¹, Sh. Srivastava^{2*}</p> <p>¹Department of Applied Chemistry, BBAU, Lucknow-226025, U.P., India ²Chemical laboratories, Feroze Gandhi College, Raebareilly-226001, U.P., India</p> <p>ARTICLE INFO</p> <p>Article history: Received: 2016-03-24 Accepted: 2016-11-19</p> <p>Keywords: Kinetics Mechanism Ir(III) Catalysis D-Mannitol Chloramine-T Acidic Medium</p> <p>ABSTRACT</p> <p>The present paper deals with the kinetics and mechanism of homogeneously Ir(III) chloride catalyzed oxidation of D-mannitol by chloramine-T [CAT] in perchloric acid medium in the temperature range of 30 to 45 °C. The reaction is carried out in the presence of mercuric acetate as a scavenger for chloride ion. The experimental results show first-order kinetics with respect to the oxidant [CAT] and catalyst [Ir(III)], while zero-order with respect to substrate, i.e., D-Mannitol was observed. The reaction shows negligible effect of [Hg(OAc)₂], [H⁺] and ionic strength of the medium. Chloride ion positively influences the rate of reaction. The reaction between chloramine-T and D-Mannitol in acid medium shows 2:1 stoichiometry. To calculate activation parameters, the reactions have been studied at four different temperatures between 30 to 45°C. A mechanism involving the complex formation between catalyst and oxidant has been proposed. Mannonic acid has been identified chromatographically and spectroscopically as the final product of oxidation of D-Mannitol. Based on the kinetic data, reaction stoichiometry, and product analysis, a reaction mechanism has been proposed and rate law derived.</p> <p>1. Introduction</p> <p>The sodium salts of arylhalosulfonamides, generally known as organic haloamines, have attracted the attention of many chemists, as versatile redox titrants [1]. The miscellaneous chemical behaviour of organic haloamines is accredited, in general, to their ability to act as halonium cations, hypohalites, N-anions which act both as bases and nucleophiles and nitrenoids in limiting cases [2]. As a result, these compounds react with a wide range of functional groups to cause numerous kinds of molecular changes. Aromatic N-haloamines act as mild oxidants in both acid and alkaline solutions due to the presence of strongly polarized N-linked halogen in +1 state [3,4]. A prominent member of the group of Sodium N-chloro-p-toluenesulfonamide</p> <p>or</p> <p>*Corresponding author: she_sru22@yahoo.com</p>
Title of the Paper/Vol./No./ Page	Kinetic, Mechanistic, and Thermodynamic Investigations of Iridium (III) Catalyzed Oxidn of D-Mannitol byN-Chloro-PToluene sulfonamide in Per chloric Acid Medium , Vol. 14, No. 4, 77-89		
Department of the Teacher	Chemistry		
Name of the Journal	Iranian Journal of Chemical Engineering		
Year of Publication	2017		
ISSN	1735-5397		
Link of the recognition in UGC enlistment of the Journal			

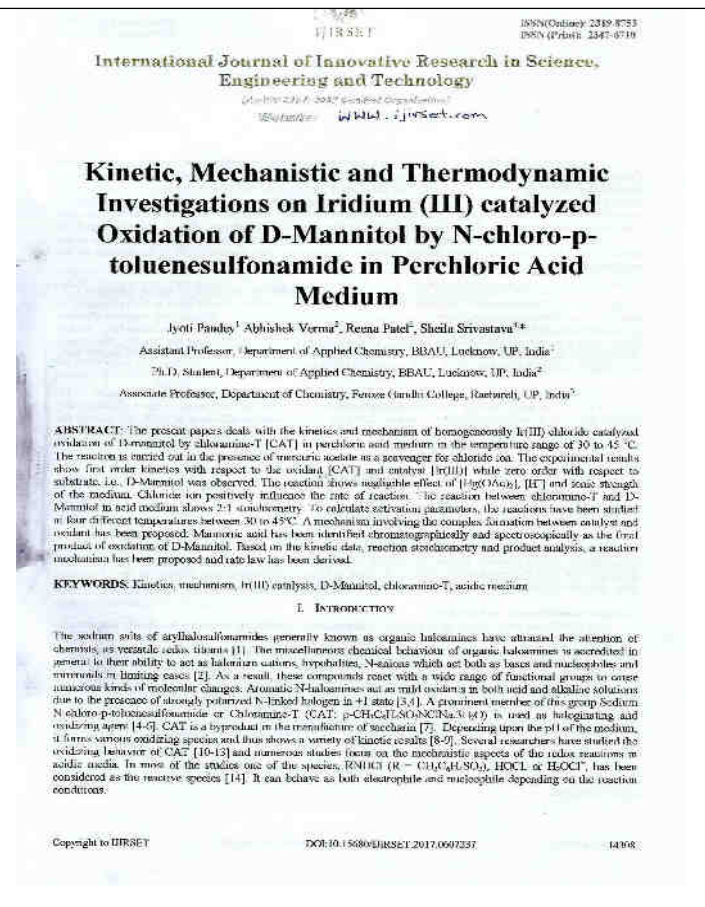
99	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Kinetic & Mechanistic Investigation on Oxidation of L-Alanine and L-leucine by Chloramine-T (CAT) Using Chloro-complex of Ir(III) in its Nano-Concentration Ranges Homogeneous Catalyst A Comparative Study 3(8), 590-597,
	Department of the Teacher	Chemistry
	Name of the Journal	International Journal of Scientific Research in Science, Engineering and Technology
	Year of Publication	2017
	ISSN	2395-1990
	Link of the recognition in UGC enlistment of the Journal	
100	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Iridium (III) Catalyzed Oxidation of D-Sorbitol By Sodium N-Chloro-P-Toluenesulfonamide in Perchloric Acid Medium: Mechanistic Approach and Kinetic Modelling 5(12)754-763
	Department of the Teacher	Chemistry
	Name of the Journal	International Journal for Research in Applied Science & Engineering Technology
	Year of Publication	2017
	ISSN	2321-9653
	Link of the recognition in UGC enlistment of the Journal	



101	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Kinetic and thermodynamic properties of pharmaceutical drug (Gabapentin) by potassium bromate (KBrO ₃) in presence of micro amount of Ir(III) chloride as catalyst in acidic medium” 3(2) 158-164
	Department of the Teacher	Chemistry
	Name of the Journal	Chemistry International
	Year of Publication	2017
	ISSN	2410-9649
	Link of the recognition in UGC enlistment of the Journal	



102	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Kinetic, Mechanistic and Thermodynamic Investigations on Iridium (III) catalyzed Oxidation of D-Mannitol by N-chloro-p-toluenesulfonamide in Perchloric Acid Medium 6(7), 14308-18
	Department of the Teacher	Chemistry
	Name of the Journal	International Journal of Innovative Research in Science, Engineering and Technology (IJIRSET)
	Year of Publication	2017
	ISSN	2319 - 8753
	Link of the recognition in UGC enlistment of the Journal	



103	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Mechanistic Investigation on Pd (II) Catalyzed Oxidation of Paracetamol by Potassium Bromate (KBrO3) in Presence of HClO4 Acid Medium: A Kinetic Model” 4(7), 277-284
	Department of the Teacher	Chemistry
	Name of the Journal	International Advanced Research Journal in Science,
	Year of Publication	2017
	ISSN	2394-1588
	Link of the recognition in UGC enlistment of the Journal	

UGC Approved Journal
IARJSCT
International Advanced Research Journal in Science, Engineering and Technology
ISSN 2394-1588 (Print)
Vol. 4, Issue 7, July 2017

Mechanistic Investigation on Pd (II) Catalyzed Oxidation of Paracetamol by Potassium Bromate (KBrO₃) in Presence of HClO₄ Acid Medium: A Kinetic Model

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Abstract: The present paper deals with the kinetic and mechanistic investigation of Pd(II) catalyzed oxidation of paracetamol by potassium bromate (KBrO₃) in presence of perchloric acid medium at 30°C. The experimental results shows a first order kinetics with respect to [Pd(II)] and [Paracetamol]. The reaction showed negative effect for [HClO₄] concentration, in threefold the rate of reaction. Negligible effect of [KBrO₃] and ionic strength of the medium was observed. Variation of [K⁺] does not show any significant change on the rate of reaction. The values of rate constants observed at different temperatures (30 to 42°C) were utilized to calculate the activation parameters. Kinetic data and kinetic plots have been identified as (3+1) oxidation products of the reaction. Possible mechanism has been proposed conforming with the kinetics, stoichiometry and products of the reaction. The rate law has been derived from obtained kinetic data.

Keywords: Kinetics, Pd(II) chloride, oxidation, Paracetamol, Potassium bromate, Acetic acid.

1. INTRODUCTION

The kinetics of paracetamol (PAM) oxidation has been studied both spectrophotometrically and potentiometrically. Spectrophotometric determination of paracetamol in drug formulation has been subject of several investigators.¹⁻⁴ In this paper it has been used to corroborate the various work done on the well known drug that finds extensive application in pharmaceutical industries in the last few decades. Paracetamol (4-hydroxyacetanilide or acetaminophen) is a well known drug that is having extensive application in pharmaceutical industries. It is synthetic and analgesic compound of high therapeutic value.^{5,6} It is also used as a substrate for pharmacokinetic (as a precursor in pharmacology) and also the 14 C¹⁴. Oxidation reactions are important in the synthesis of organic compounds, create active functional groups or modify existing functional groups in a molecule.^{7,8} Various oxidation reactions involving species such as dichromate^{9,10}, ceric ion and H₂O₂ / UV oxidant¹¹⁻²⁰ have been employed to remove organic pollutants.

The oxidation kinetics of paracetamol drug by oxidant like ceric(IV) solutions, metal ion oxides, metal complex, use of catalytic, oxidation of metals, product effect, is of importance to understand the mechanism of metabolic conversion of paracetamol in biological systems and also identify the reactive species of the oxidant in aqueous acid-base. Till date the nature of paracetamol at a molecular level is not completely understood but could be related to reformation of reactive metabolites by the peroxidase function of CYP2C9, which could degrade dihydroxy, a cofactor of enzymes such as PGH synthase²¹ which has high therapeutic value. The results of various studies are reported and corroborated by recent work have been metal platinum group metal ion including Os(IV), Ir(III), Pt(II), and Pd(II), widely used in the catalytic chemistry of palladium. Several authors have performed studies using Pd(II) because of the commercial importance of numerous catalysts by Pd(II). The kinetics for the oxidation of cyclohexane by acetonyl Pd(II) is an example²². In this study the effect of chloride ion on the reaction rate was studied in order to establish the active species of the oxidant. Generally the mechanism of catalysis depends on the nature of the substrate, the oxidant, and other experimental conditions^{19,20}. In view of the analytical studies for organic transformations, the nature of active form of Pd(II) is an example²³. In this study the effect of chloride ion on the reaction rate was studied in order to establish the active species of the oxidant. Generally the mechanism of catalysis depends on the nature of the substrate, the oxidant, and other experimental conditions^{19,20}. The present study examines, in detail the kinetic and mechanistic aspects of the Pd(II) catalyzed oxidation of paracetamol by KBrO₃ in acidic media with the following objective.

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104	Name of the Author	Dr. B.K. Bhardwaj
	Title of the Paper/Vol./No./ Page	By the effect of Surya Namaskar Sports person can develop more performance in their games and increase body fitness components like speed, endurance flexibility and strength
	Department of the Teacher	Physical Education
	Name of the Journal	International Journal of physical education and Sports Sciences
	Year of Publication	2016
	ISSN	2231-3745
	Link of the recognition in UGC enlistment of the Journal	

International Journal of Physical Education and Sports Sciences
Vol. 10, Issue No. 17, July-2016, ISSN 2231-3745

By The Effect of Surya Namaskar Sports Person Can Develop More Performance in Their Games and Increase Body Fitness Components Like Speed, Endurance, Flexibility and Strength

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Abstract: – Surya namaskar is twelve stage direct exercises. It is constantly guaranteed that it makes the practitioner fit and proportionate. This dynamic exercise causes avoid muscles and joints. Today the issue of weight is expanding sports person. The point of this investigation was to watch the impact of Surya namaskar on various physical fitness components like Speed, Endurance, Flexibility, Strength, and Strength. Every one of them was in ordinary healthy condition. The writing notices weight modification and change in the performance. The test because of standard routine with regards to Surya namaskara for 30 days essentially consider uncovered that a standard routine with regards to Surya namaskara is finished with Sun lessened weight and improve Working speed of sports persons of the exploratory gathering. In this paper we have selected 2 variables Body Fitness, Speed and Flexibility that the sports persons can essentially maintain their body with the assistance of Surya namaskara exercise.

Keywords: Surya Namaskara, Exercise, Speed, Body Fitness

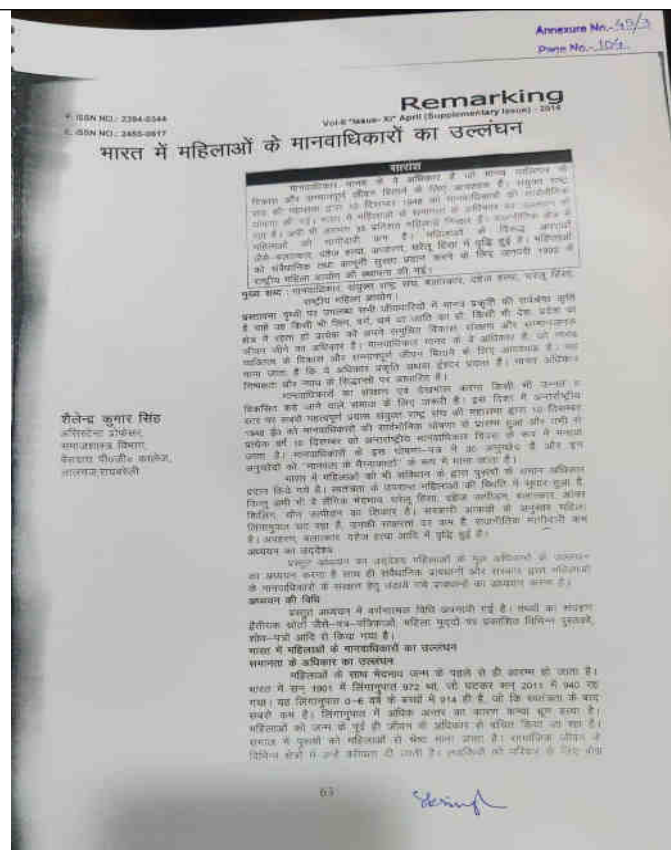
1. INTRODUCTION:
Yogic procedures however popular in nature when applied precisely and consistently, can keep one healthy, fit and proportionate. Suryanamaskara can be viewed as a direct isotonic exercise. In spite of the fact that it incorporates a few postures that are the yogic asana's, Surya namaskara isn't a yoga, since its temperament is dynamic. It should be possible by kids, youthful and old people alike. The Rig Veda says:
Sun is the soul of the whole world. Sun is the main one which gives (all) great wellbeing. Subsequently we should salute the Sun for wellbeing and long life. Surya namaskara gives energy and suppleness and keeps us healthy and fit. The Sun travels through 12 Rashi's or zodiac signs and in this way it has got 12 names. One round of Surya namaskara comprise of 12 stages or postures, outlined such that our muscles and joints wind up more grounded but flexible. The breath is likewise balanced according to the stance and the development (Singh, et. al.)
It also helps in overall development of Sports Persons which can help in increasing their Games and increase Body Fitness Components like Speed, Endurance, Flexibility and Strength


Along these lines Surya namaskara expands blood circulation. This has an effect on the endocrine function. It makes us more strong, enthusiastic and lifts up our manner. It keeps up the freshness of our brain.
Twelve Mantras of Surya Namaskara:
There are twelve names of Lord Sun (Surya) which are discussed with or without Bija Mantra, one by one preceding each round of Surya Namaskara. On the off chance that Surya Namaskara is finished with these mantras, one is unannouncedly benefited with Sun vitality. These are:
1. Om Mitraya namah
2. Om Rauxaya namah
3. Om Suriyaya namah
4. Om Bhanaya namah
5. Om Khagaya namah
6. Om pushyaya namah
7. Om bhriyagarbhaya namah

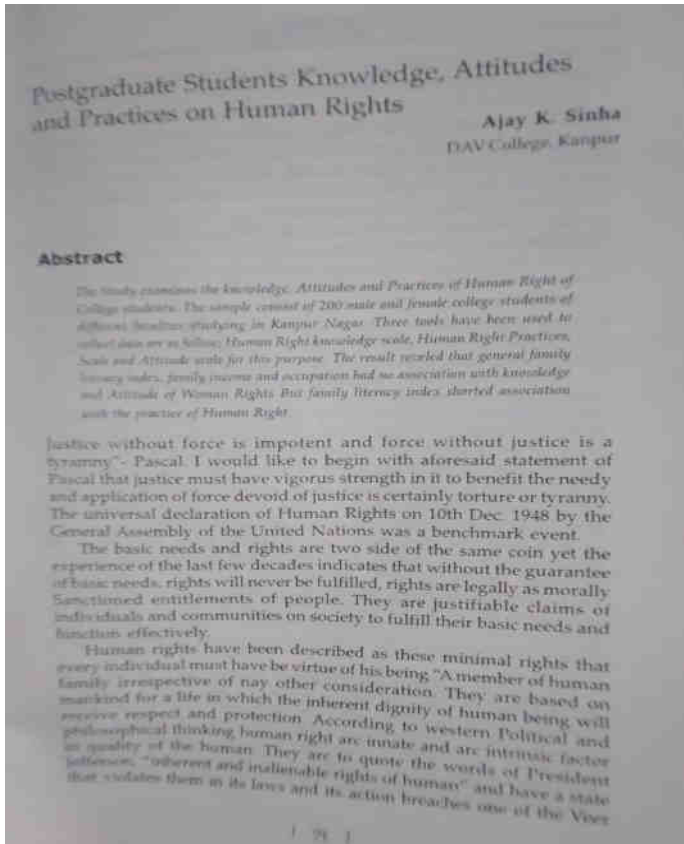
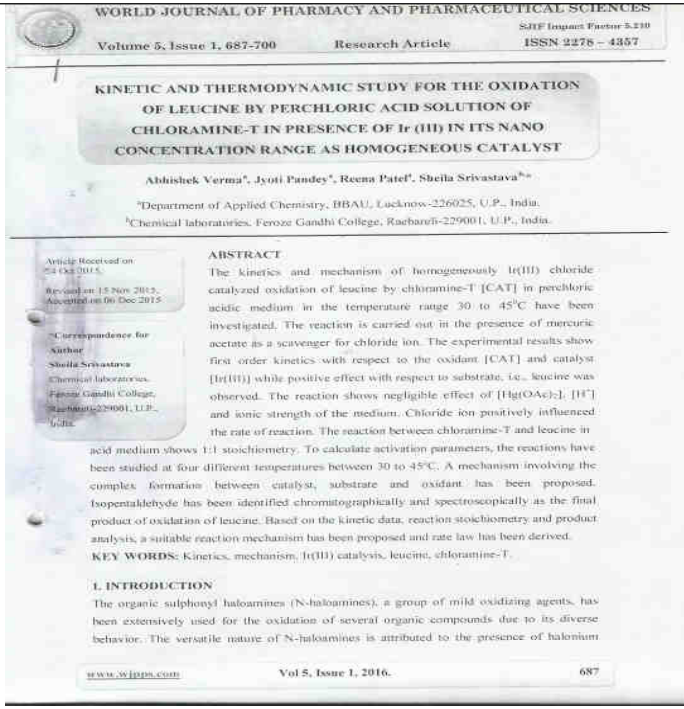
Dr. B. K. Bhardwaj¹

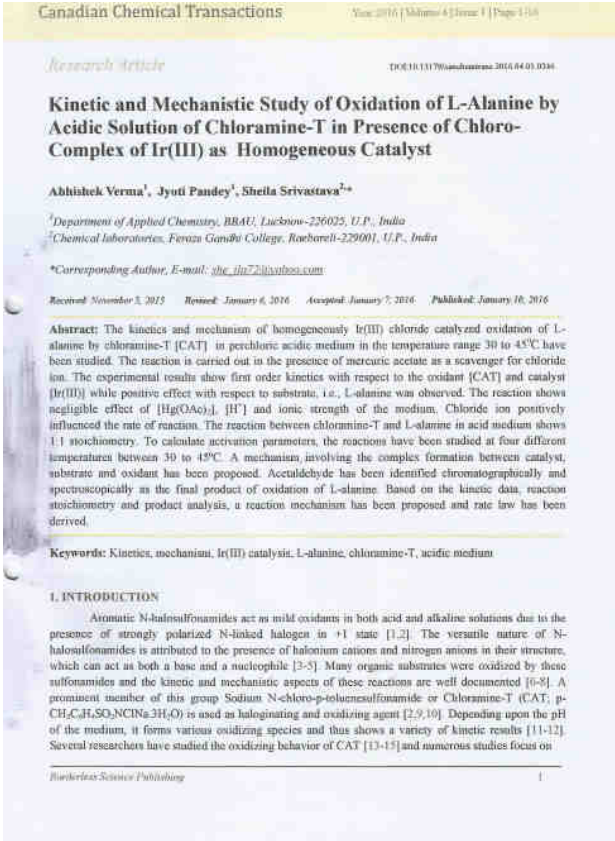
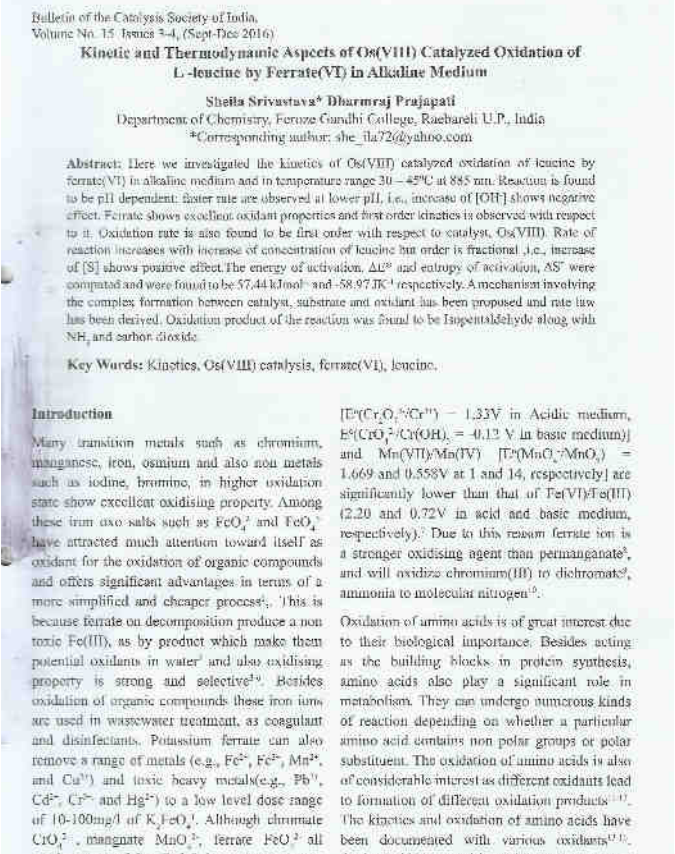
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105	Name of the Author	Dr Shailendra Kumar Singh
	Title of the Paper/Vol./No./ Page	Bharat Mein Mahilaon Ke Manavadhikaro Ka Ullanghan, 2(11),63
	Department of the Teacher	Sociology
	Name of the Journal	Remarking
	Year of Publication	2016
	ISSN	2394-0344
	Link of the recognition in UGC enlistment of the Journal	
106	Name of the Author	Dr. B.K. Bhardwaj
	Title of the Paper/Vol./No./ Page	Analysis of body heat and perspiration of kho-kho player before and after the match
	Department of the Teacher	Physical Education
	Name of the Journal	Indian streams research journal
	Year of Publication	2016
	ISSN	2230-7850
	Link of the recognition in UGC enlistment of the Journal	




107	Name of the Author	Dr.S.A.R. Abidi	<p>ISSN: 2320-5407 Int. J. Adv. Res. 4(9): 1687-1691</p>  <p style="text-align: center;">RESEARCH ARTICLE</p> <p style="text-align: center;">DILEMMA, DISPLACEMENT AND DISLOCATION IN THE NAMESAKE.</p> <p style="text-align: center;">Dr.Syed Ahmad RazaAbidi¹ and VermaMondal².</p> <p>1. Assistant Professor of English, Sri Satya Sai University of Technology and Medical Sciences, Sehore, Madhya Pradesh. 2. Research Scholar, Department of English, Sri Satya Sai University of Technology and Medical Sciences, Sehore, Madhya Pradesh.</p> <hr/> <p>Manuscript Info</p> <p>Manuscript History Received: 17 July 2016 Final Accepted: 19 August 2016 Published: September 2016</p> <p>Key words: Dispora, Displacement, Language, Alienation, Dislocation</p> <p>Abstract Jhumpa Lahiri mainly deals with the ordinary life of immigrants settled abroad. Her novel <i>The Namesake</i> speaks about the relationship and rituals of family and country in a simple yet elegant and profoundly controlled manner. It also deals with the issues of cultural and racial - discrimination and the problems of inter-racial relationship. The story of the novel is woven around an immigrant Indian Bengali family living in United States of America. The attempt of Ashoke and Ashima Ganguli to adjust in the new ambience and the feeling of frustration and displacement experienced by their son Gogol forms the theme of the novel. Jhumpa Lahiri shows that though immigrants struggle to conserve their customs and ethnicity, yet they gradually imbibe the social and cultural way of life of the host country.</p> <p style="text-align: right;"><i>Copy Right, IJAR 2016., All rights reserved.</i></p> <hr/> <p>Introduction:- Jhumpa Lahiri's <i>The Namesake</i> (2005) is a novel about Asian, particularly Indian immigrants in America. It deals with the diasporic experiences of these immigrants and presents in detail the problems of adjustment and non-belonging, identity crisis and rootlessness. It also deals with the issues of cultural and racial - discrimination and the problems of inter-racial relationship. On the surface level <i>The Namesake</i> is a simple story of a family moving to America in search of a prospective livelihood. Ashoke Ganguli is an electrical engineer working towards his doctorate in MIT, Massachusetts. One summer he comes to India and returns with his new bride Ashima. For the next thirty years, the novel follows the lives of this young couple as they try to find their foothold in a foreign land. As they settle down with their two children, America almost becomes their home. A deeper look at the characters reveals a discontentment as they try to assimilate themselves. As first generation immigrants, Ashoke and Ashima look to India for bonding. Their children, Gogol and Sonia, born and brought up in America, cannot relate to this bonding. The central characters, especially Ashima and her son Gogol are like waves battling to reach their home but always returning discontent. As the story progresses, it can be seen that the characters are sucked into the cultural vortex. Trying to find a balance between their inherent Indian culture and the adoptive American culture, they turn out to represent fine examples of multiculturalism.</p> <hr/> <p style="text-align: center;">Corresponding Author: Dr. Syed Ahmad Raza Abidi. Address: Assistant Professor of English, Sri Satya Sai University of Technology and Medical Sciences, Sehore, Madhya Pradesh.</p> <p style="text-align: right;">1687</p>
	Title of the Paper/Vol./No./ Page	Dilemma, Displacement and Dislocation In The Namesake.	
	Department of the Teacher	English	
	Name of the Journal		
	Year of Publication	2016	
	ISSN	2320-5407	
	Link of the recognition in UGC enlistment of the Journal	https://www.journalijar.com/article/12148/dilemma,-displacement-and-dislocation-in-the-namesake/	
108	Name of the Author	Dr. Atul Singh	<p style="text-align: center;">हिन्दी आलोचना में नई कहानी विषयक विमर्श</p> <p style="text-align: right;">अतुल सिंह*</p> <p>कहानी जीवन-मूल्यों से सरोकार रखने वाली साहित्य की एक महत्वपूर्ण विधा है। नई कहानी विषयक विमर्श में इस विषय पर लगभग सभी आलोचक एवं कहानीकार एक मत दिखाई पड़ते हैं, केवल समस्वरूप चतुर्वेदी जी को छोड़कर। चतुर्वेदी जी का ऐसा मानना है कि 'कहानी आधुनिक भावबोध को वहन करने में अक्षम है। वस्तुतः यह चतुर्वेदी जी का काव्य-प्रेम एवं यथार्थ विरोधी दृष्टि है जो कहानी को यथार्थ वहन में अक्षम पाती है। बहरहाल, नई कहानी के कहानीकार एवं आलोचक कहानी की स्वायत्ता एवं निजता की पहचान करते हैं। कहानी में जीवन-मूल्यों की संतुलन की जाती है। साथ ही हिन्दी आलोचना में अब तक, कहानी के प्रति बरते गये उदासीन रवियों पर संवाल खड़े किये जाते हैं। डॉ. नामवर सिंह नई कहानी में समकालीन यथार्थ की अभिव्यक्ति की पहचान करते हैं और कहानी आलोचना के लिए 'सार्थकता' एवं 'सोपदेश्यता' विषयक आलोचनात्मक प्रतिमानों को प्रस्तावित करते हैं। इसी प्रकार देवीशंकर अवस्थी भी कहानी साहित्य को गम्भीरता से देखने की बात करते हैं। उन्होंने लिखा है "कहानी के साथ एक और दुखद स्थिति यह भी रही कि उसे उपन्यास का खासा गरीब सम्बन्धी माना जाता रहा। उपन्यास को यदि सामाजिक इतिहास मानकर विवेचित किया गया तो कहानी को तो कुछ विषयवस्तु या शैली सम्बन्धी वर्गीकरणों के भीतर नाम देना ही पर्याप्त समझा गया।" वस्तुतः यह लोकसांख्यिक दृष्टि का दबाव है जो आलोचकों के यहाँ असर पैदा करती है जिससे कहानी जैसी साहित्य की उपेक्षित विधा आलोचना के केन्द्र में आती है। साथ ही स्वतंत्रता के बाद हिन्दी कहानी के क्षेत्र में अमरकान्त, मार्कण्डेय, शेखर जोशी, कमलेश्वर, राजीव यादव, मोहन राकेश, देवू, निर्मल वर्मा, कृष्णा सोबती, मन्नु भण्डारी एवं शिवप्रसाद सिंह जैसे कहानी लेखकों की महत्वाकांक्षी पीढ़ी आती है, जिन्होंने हिन्दी कहानी को न सिर्फ सन्दर्भदान बनाया अतिसु हिन्दी आलोचना से कहानी के मूल्यांकन के लिए उपेक्षित माग भी की। कथा आलोचना में इस पीढ़ी के अवदान को स्वीकार करते हुए डॉ. निर्मला जैन लिखती हैं "हिन्दी की कथा समीक्षा के इतिहास में छठे दशक के मध्य युवा कथाकारों की एक पूरी पीढ़ी का उदय महत्वपूर्ण घटना है।"</p> <p>नई कहानी की व्याख्या में यह एक संशय महत्वपूर्ण बना रहा कि सन् 1950 के बाद की हिन्दी कहानी को क्या कहने की आवश्यकता क्यों पड़ी? क्यों नहीं नई कहानी को कहानी की अनवरत विकास प्रक्रिया में देखा गया? इस</p> <p style="text-align: right;">* श्रीम छात्र, दिल्ली विश्वविद्यालय, दिल्ली, Email: atultika@gmail.com</p>
	Title of the Paper/Vol./No./ Page	Critical paradigm of new story and its relevance	
	Department of the Teacher	Hindi	
	Name of the Journal	Uttarvarta	
	Year of Publication	Aug. 2016	
	ISSN	2455-3859	
	Link of the recognition in UGC enlistment of the Journal		

109	Name of the Author	Dr. Ajay Kumar Sinha	
	Title of the Paper/Vol./No./ Page	Post Graduate Studies Knowledge Attitudes and Practice on Human Right	
	Department of the Teacher	Defence Studies	
	Name of the Journal	Security Charioteer	
	Year of Publication	Jan.2016	
	ISSN	2394-3939	
	Link of the recognition in UGC enlistment of the Journal		
110	Name of the Author	Sheila Srivastava	
	Title of the Paper/Vol./No./ Page	Kinetic and thermodynamic study for the oxidation of Leucine by perchloric acid solution of Chloramine-T in presence of Ir(III) in its Nano Concentration range as homogeneous catalyst, , Volume 5, Issue 1, 687-700	
	Department of the Teacher	Chemistry	
	Name of the Journal	World J. Of Pharmacy and Pharmaceutical Sciences	
	Year of Publication	2016	
	ISSN	2278- 4357	
	Link of the recognition in UGC enlistment of the Journal		

111	Name of the Author	Sheila Srivastava	
	Title of the Paper/Vol./No./ Page	Kinetic and Mechanistic Study of Oxidation of L-Alanine by Acidic Solution of Chloramine-T in Presence of Chloro-Complex of Ir(III) as Homogeneous Catalyst, Volume 4, Issue 1, 1-16	
	Department of the Teacher	Chemistry	
	Name of the Journal	Canadian Chemical Transactions,	
	Year of Publication	2016	
	ISSN		
Link of the recognition in UGC enlistment of the Journal			
112	Name of the Author	Sheila Srivastava	
	Title of the Paper/Vol./No./ Page	Kinetic and thermodynamic aspects of Os(VIII) catalyzed oxidation of L-leucine by Ferrate(VI) in Alkaline medium, 15(3-4), 1-8	
	Department of the Teacher	Chemistry	
	Name of the Journal	Bulletin of Catalysis Society of India,	
	Year of Publication	2016	
	ISSN	1566-7367	
Link of the recognition in UGC enlistment of the Journal			

113	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Os(VIII) Catalyzed Oxidn of L-Arginine by Ferrate(VI) in Alk. medium: A Kinetic Study,5(3),37-45,
	Department of the Teacher	Chemistry
	Name of the Journal	International J. of Chemical & Physical Sciences
	Year of Publication	2016
	ISSN	2319-6602
	Link of the recognition in UGC enlistment of the Journal	
114	Name of the Author	Ramesh Chandra Yadav
	Title of the Paper/Vol./No./ Page	"Environmental movements in India: A Sociological Perspective" pp 39-45
	Department of the Teacher	Sociology
	Name of the Journal	Ayan (An International Multi disciplinary quaterly Refereed Research Journal. vol-3
	Year of Publication	2015
	ISSN	23-47-4491
	Link of the recognition in UGC enlistment of the Journal	



LJCPSS Vol. 5, No. 3, May-Jun 2016
www.ijcpss.org

ISSN-2319-6602
International Journal of Chemical and Physical Sciences

OS (VIII) Catalysed Oxidation of L- Arginine by ferrate (VI) in Alkaline Medium: A Kinetic Study

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Abstract

Os (VIII) promoted oxidation of L-arginine by Fe(VI) has been studied spectrophotometrically in alkaline medium at 883 nm. Reaction is found to be pH dependent; faster rate are observed at lower pH. Fe(II) shows excellent oxidant properties and first order kinetics is observed with respect to it. Oxidation rate is also found to be first order with respect to catalyst. Os (VIII). Rate of reaction increases with increase in concentration of arginine but order is fractional. i.e., increase of [S] shows positive effect. Oxidation product of the reaction was found to be 1-(4-oxobutyl) guanidine along with NH₃ and carbon dioxide. A plausible mechanism conforming to the results of kinetic studies, reaction stoichiometry and product analysis has been proposed. The energy of activation, E_a and entropy of activation, ΔS[‡] were computed and were found to be 64.62 kJmol⁻¹ and 33.92 JK⁻¹ respectively.

Keywords: Oxidation, L-Arginine, Ferrate (VI), Os (VIII).

Introduction

Recently considerable attention has been focused on diverse nature of the chemistry of Fe^{VI}. Oxidative properties of ferrate (VI) has been found to be strong but selective. The reduction potential for Fe(VI)(III) are +2.2 V to -0.7 V in acidic and basic solutions, respectively[1]. It is employed for the oxidation of many functional groups and found that it oxidised primary alcohol to aldehyde, secondary alcohol to ketone, primary amine to aldehyde and amino acid oxidised by degrading to carbonyl compound [2-5]. It also attracted interest in "green chemistry" because side product of its redox reaction are rust like iron oxides which are environmentally innocuous and for this reason K₂FeO₄ has been described as a "green oxidant". The ferrate ion is a stronger oxidising agent than peroxodisulfate[6] and will oxidise chromium (III) to chromate[7] and ammonia to molecular nitrogen[8]. Ferrate are excellent disinfectants and are capable of removing and destroying viruses[9].

L-arginine is an α-amino acid that is used in the biosynthesis of proteins. Arginine is classified as a semiessential or conditionally essential amino acid, depending on the developmental stage and health status of the individual [9]. Arginine plays an important role in cell division, the healing of wounds, removing ammonia from the body, immune function, and the release of hormones [10-12].

The uncatalyzed oxidation of arginine by alkaline ferrate has been carried out at 303K. Because the direct reaction between alkaline ferrate and arginine was very slow and Os(VIII) was found to catalyze the reaction considerably, we have undertaken detailed kinetic and mechanistic study of the title reaction in alkaline medium.

OS (VIII) Catalysed Oxidation of L- Arginine by ferrate (VI) in Alkaline Medium: A Kinetic Study

SHEILA SRIVASTAVA*
DIIARMRAJ PRAJAPATI

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Environmental movements in India: A Sociological Perspective

* Dr. Ramesh Chandra Yadav

Introduction

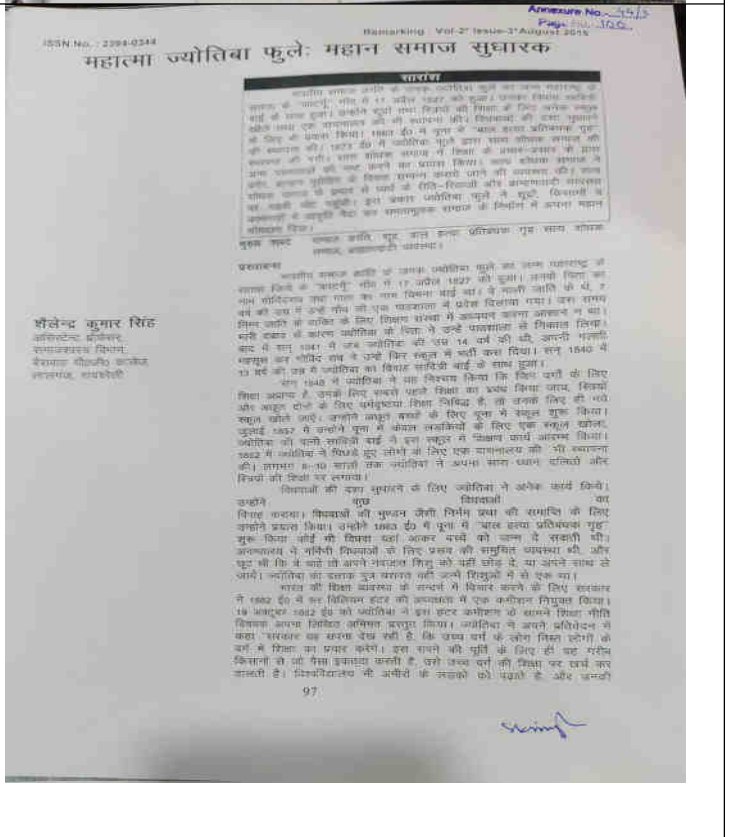
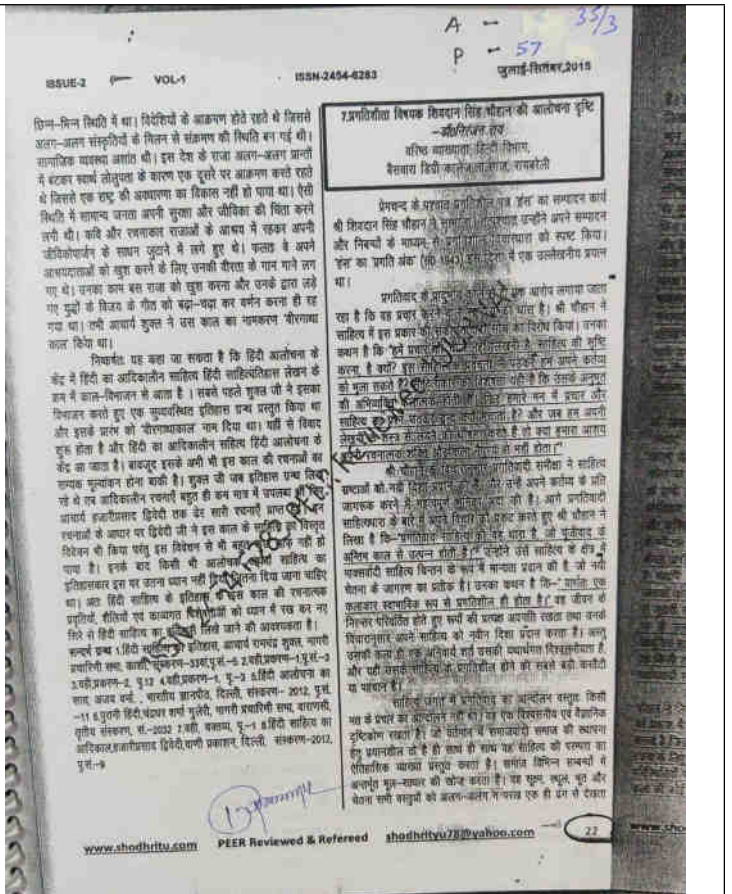
India is a land of enormous diversity- physical, ecological, social, cultural and linguistic. With nearly seventeen percent of the world's population and only about four percent of its land area, there is obviously a heavy pressure on the natural resources including land. It is so in spite of the fact that an average Indian consumes much lower quantum of resources than a person in the developed world. Population of ten million (2001) is growing at one point seven percent every year and it puts enormous pressure on the country's natural resources and reduces the scope of development. Urbanization, industrial growth, transport systems, agriculture, housing, etc. pose other challenges before the nation.

Population, poverty and environment are interrelated. India has often been described as a rich land with poor people. The nexus between poverty and environmental degradation can hardly be over emphasised. The vast majority of people are directly dependent on the natural resources of the country for their basic needs of food, fuel, shelter and fodder. About twenty four percent of the country's population still lives below the poverty line. Environmental degradation has adversely affected the poor who depend on the resources of their immediate surroundings.

In India, rapid growth of population, poverty, urbanization, industrialization and several related factors are responsible for rapid degradation of the environment. Environmental problems have become serious in many parts of the country and can no longer be neglected. The main environmental problems in India are as follows:

- Land degradation
- Deforestation
- Mining

115	Name of the Author	Dr. Niranjan rai
	Title of the Paper/Vol./No./ Page	Pragatisheeta Vishayak Shivdaan Singh Chauhan Ki Alochana Drishti, 2(1), 22
	Department of the Teacher	Hindi
	Name of the Journal	Shodh Ritu
	Year of Publication	2015
	ISSN	2454-6283
	Link of the recognition in UGC enlistment of the Journal	
116	Name of the Author	Dr Shailendra Kumar Singh
	Title of the Paper/Vol./No./ Page	Mahatama Jyotiba Phule: Mahan Samaj Sudharak, 2(3), 97
	Department of the Teacher	Sociology
	Name of the Journal	Remarking
	Year of Publication	2015
	ISSN	2394-0344
	Link of the recognition in UGC enlistment of the Journal	



117	Name of the Author	Ramesh Chandra Yadav	
	Title of the Paper/Vol./No./ Page	"Role of Women in Indian Democracy." pp138-148	
	Department of the Teacher	Sociology	
	Name of the Journal	The Opinion (An International Refereed Research Journal January-June 2015)	
	Year of Publication	2015	
	ISSN	2277-9124	
	Link of the recognition in UGC enlistment of the Journal		
118	Name of the Author	Ramesh Chandra Yadav	
	Title of the Paper/Vol./No./ Page	"Emerging models of rural leadership (with reference to Sultanpur district of Uttar Pradesh)" pp. 378-386	
	Department of the Teacher	Sociology	
	Name of the Journal	Mangalam (Half yearly Journal of Humanities & Social Sciences)	
	Year of Publication	2015	
	ISSN	0976-8149	
	Link of the recognition in UGC enlistment of the Journal		

119	Name of the Author	Ramesh Chandra Yadav	<p style="text-align: center;">ENVIRONMENT AND SUSTAINABLE DEVELOPMENT: A SOCIAL SCIENTIFIC STUDY</p> <p style="text-align: center;">Dr. Ramesh Chandra Yadav <i>Academic Consultant-Sociology, School of Social Science, U.P. Rajarshi Tomdas Open University, Allahabad</i></p> <p>Environment is a comprehensive term which in general refers to surroundings but in geographical perspective environment includes abiotic (physical- land, water and air) and biotic (plants and animals) components of the life supporting layer- the biosphere. The Earth is the only planet having different kinds of life forms wherein there are complex sets of interrelationships between the physical and biological components. Various linkages between the physical and biological components at different levels maintain the unity of the biospheric ecosystem. Ecosystem is defined as a fundamental functional unit occupying spatial dimension of 'earth spaceship' characterized by total assemblage of biotic community and abiotic components and their mutual interactions within a given time unit. (Savindra Singh, 1991) Various physical, chemical and biological processes are continuously engaged in the creation, maintenance and destruction and recreation of surface materials of earth's surface (both organic and inorganic). The process involved in the creation of earth materials inorganic is known as 'geological cycle' which includes a set of several sub-cycles eg. the hydrological cycle, the rock cycle, the geochemical cycle and the geotectonic cycle. The earth materials viz. minerals, rocks, soils, water, etc. are not only created but are also maintained, changed in their properties, transferred from one place to another and even destroyed by geological cycle but these materials even passing through the aforesaid pathways remain initially uncontaminated and are very useful for man.</p> <p>Physical and biological processes operate according to the law of uniformitarianism. James Hutton's law of uniformitarianism having two basic principles of 'the present is the key to the past' and 'no vestige of a beginning no prospect of an end', postulated in 1785, and related to 'cyclic nature of earth's history' states that 'all the physical laws and processes which operate today, operated throughout geological time, although not necessarily always with the same intensity as now'.</p> <p>Physical and biological processes of the natural environment system operate in such a way that any change in any part of the environment at any place in a scientific time period is suitably compensated by negative feedback mechanism in a natural condition.</p>
Title of the Paper/Vol./No./ Page	"Environment and Sustainable Development: A Social Scientific Study" pp75-80		
Department of the Teacher	Sociology		
Name of the Journal	Anusilana (Research Journal Year 2015)		
Year of Publication	2015		
ISSN	0973-8762		
Link of the recognition in UGC enlistment of the Journal			
120	Name of the Author	Dr. Surjan Yadav	<p style="text-align: center;">महात्मा गाँधी का सर्वोदय विचार</p> <p style="text-align: right;">सुरजन यादव</p> <p style="text-align: right;">3/7</p> <p>महात्मा गांधी विचार के एक ऐसे व्यक्ति हैं, जिसने बिना एक एक मूल ब्रह्मण, नयी क्रांति की शुरुआत किया, जिसके दर्शन ने समाजकालीन भारत के सामाजिक, राजनीतिक, आर्थिक तथा धार्मिक क्षेत्र में एक नयी व्यवस्था का संघर्ष किया। इस क्रांति को सर्वोदय की संज्ञा से अभिविष्ट किया जाता है। इस क्रांति को उस समय परिचय में बदलने की संविधि की अवस्था पराधीन था। एक परकीय राष्ट्र में कार्य करने की संकुचित सीमाएँ होती हैं। इन विषय परिस्थिति में भी गांधी ने स्वराज्य प्राप्त हेतु अपने स्वयं शक्तिवत् तथा अधिकाधिक विधियों के प्रयोग से देश को परकीयता की बंधनों से मुक्त करवाने अपने विद्वानों की व्यावहारिक सहायता को सिद्ध किया। गांधी दर्शन की इस विवेचना के कारण श्रेष्ठ धार्मिक ज्यों ही कार्य का बल कि यदि विश्व में एक ही एक मूल ब्रह्मण विचार 'सर्वोदय' होने का सन्तान यदि किसी दर्शन में है तो यह गांधी का दर्शन है।</p> <p>सर्वोदय दर्शन ने उनका परिचय 1904 में परिसम की पुस्तक 'नवजन्म जीवित जीवन' से हुई जब वे जोलान्सवर्ग से उद्वेग की रस यात्रा कर रहे थे। उनके मित्र पोलाक ने उन्हें परिसम की यह पुस्तक दस्तों में पढ़ने के लिए दी थी। गांधी जी एक बार जो इस पुस्तक को पढ़ना शुरू किया तो उन्हें पते नहीं हटा सके। इस पुस्तक ने उनके अकथित विचारों में सारी रात को नहीं सके। सारिखा जो वह पुस्तक उनके मन पर छाई रही उन्होंने उसी समय यह सूत्र प्रतिष्ठा की कि वे अपने जीवन को इस पुस्तक के आदर्शों के अनुक्रम करेंगे। उन्होंने कहा है कि 'यह पुस्तक मेरे जीवन मोड़-बिन्दु बनित करती है।' गांधी ने 'नवजन्म जीवित' का मुद्रण ही में अनुवाद सर्वोदय नाम से किया है जिसका प्रमुख भाग का कल्याण है, किसी दर्शन विरोध का नहीं। नही अर्थों में इस पुस्तक का हिन्दी अनुवाद-सर्वोदय होना चाहिए था, किन्तु गांधी ने उसे सर्वोदय कहा। यह शीर्षक ही स्पष्ट करता है कि गांधी की विचारधारा किस दिशा में दौड़ रही थी। जैनेन्द्र कुमार ने ठीक ही लिखा है-"गांधी की चिन्तन की आशा को सर्वोदय में बदल कर अधिक व्यापक बना दिया तब यह संज्ञा प्रतियुक्त मात्र न रहकर अधिक भावनात्मक एवं सांकेतिक हो गयी।"</p> <p>आदर्शों के रूप में 'सर्वोदय' शब्द बहुत व्यापक है। यह एक नया जीवन दर्शन है। एक नई 'व्यक्ति' है। एक नई समाज संरचना है। दादा दामोदरजी ने कहा है-सर्वोदय से तात्पर्य है सबका उदय, सबका उत्कर्ष, सबका विकास। सर्वोदय शब्द भले ही नया हो किन्तु उसका अर्थ सबका जीवन मान-साथ सम्पन्न हो इतना ही है। जीवन का अर्थ है विकास, अनुदय या उत्थिति। इसलिए सबका सह विकास ही, परन्तु प्राचीन समय में अनुदय शब्द का प्रयोग ऐतिहासिक समय के अर्थ तक ही सीमित था। इसलिए गांधी जी ने केवल 'उदय' शब्द का प्रयोग ही किया एक साथ समान रूप से सबका विकास हो, यही सर्वोदय का अर्थ है।" सर्वोदय की अवधारणा को स्पष्ट करने के लिए कुमार (1974) ने लिखा है-"सर्वोदय से आशय है सबका मूल। इस आधार पर सभी व्यक्ति भेद से बचे होंगे, जिसमें कोई भेदभाव नहीं होगा। राजा तथा किसान, हिन्दू एवं मुसलमान, पूँट एवं आहुत, मोरे और काले, अफरकी एवं सन्त सभी बराबर होंगे। कोई भी दल अथवा व्यक्ति किसी भी दल अथवा व्यक्ति को उच्च अथवा जीवन नहीं करेगा। सर्वोदय समाज में सभी सदस्य समान होंगे, प्रत्येक को उसके परिश्रम का उचित प्रतिफल मिलेगा सबके व्यक्ति समाज के निर्बन्धन व्यक्तियों की रक्षा तथा उनकी संरक्षता का कार्य करेंगे। इस प्रकार सभी व्यक्ति मूल करने में सहायक होंगे।"</p> <p>* शोध-पत्र, दर्शन एवं धर्म विभाग, काशी हिन्दू विश्वविद्यालय, वाराणसी</p>
Title of the Paper/Vol./No./ Page	Sarvodya Thoughts of Mahatma Gandhi		
Department of the Teacher	Philosophy		
Name of the Journal	Varanasi Management Review		
Year of Publication	Dec. 2015		
ISSN	2395-4965		
Link of the recognition in UGC enlistment of the Journal			

121	Name of the Author	Dr. Surjan Yadav
	Title of the Paper/Vol./No./ Page	Mahatma Gandhi's thoughts on women
	Department of the Teacher	Philosophy
	Name of the Journal	Research Highlights
	Year of Publication	2015
	ISSN	2350-0611
	Link of the recognition in UGC enlistment of the Journal	
122	Name of the Author	Dr. Puspa Baranwal
	Title of the Paper/Vol./No./ Page	Baal Rangmanch: Kuch Mudde, Kuch Vimarsh, 71, 7, 9-11
	Department of the Teacher	Hindi
	Name of the Journal	Aajkal (UGC Care Listed)
	Year of Publication	2015
	ISSN	0971-8478
	Link of the recognition in UGC enlistment of the Journal	www.publicationdivision.nic.in

महात्मा गाँधी का स्त्री-चिन्तन

सुरजन यादव*

भारतीय जीवन शैली एवं चिन्तन में गाँधी जी को कई महत्वपूर्ण योगदान रहे हैं। उनके विशाल व्यक्तित्व की यह अनोखी विशेषता है कि वे समाज को प्रवेशक आंग पर समाज रूप से सुदृष्टि रखते हैं। समाज व्यक्तियों का समूह है, उसमें स्त्री भी समाज की एक समान सहायिका है। किन्तु तत्कालीन समाज में नारी विषयक दृष्टिकोण में पूर्ण अवगतता 'समाज होने की अवधारणा' पर ही प्रवृत्त लगा रही थी। इसलिए आवश्यक था कि स्त्री-विषयक दृष्टिकोण में परिवर्तन लाकर उसे प्रमुख पद के समकक्ष स्थान प्रदान किया जावे ताकि एका ऐसे समाज का नव-निर्माण हो सके जिससे स्वतंत्रता सहसंरचना हो। इस सम्बन्ध में महात्मा गाँधी का चिन्तन महत्वपूर्ण है। उनके अनुसार पुरुष की तुलना में महिलाओं के लिए कोई अयोग्यता नहीं होती चाहिए। यह पुत्र एवं पुत्री के साथ एक समान व्यवहार करने में विश्वास करते थे। उनके लिए किसी भी प्रकार का अन्याय हिंसा का एक समान व्यवहार करने में विश्वास करते थे। उन्होंने लिए किसी भी प्रकार का अन्याय हिंसा का एक रूप था, महात्मा गाँधी ने जीवन के अनुभव से यह शिक्षा प्राप्त की थी कि मानव समाज के निर्माण एवं विकास में महिलाओं की भूमिका महत्वपूर्ण रही है। लेकिन यह भी एक अकादमिक चिन्तन है कि एवं विकास में महिलाओं की स्थिति कोई श्रेष्ठ नहीं रही। हालाँकि वैदिक युग में तो उनकी शक्ति को अस्वीकार नहीं किया, परन्तु प्रया, अहिंसा आदि चरित्रों से युक्त तरह महिला समाज प्रवृत्त बनी गई और स्त्री ने हरिजन के उद्धार के साथ-साथ महिला समाज के उद्धार का भी विनियम किया और स्त्री को नव-मुद्राओं पर प्रहार किया जो महिलाओं की प्रगति में बाधा बनी। गाँधी जी ने स्त्रियों को प्रमुख के समान मानते हुए कहा कि 'जिस प्रकार बुनियादी तौर पर स्त्री और पुरुष एक हैं, उसी प्रकार सभ्यता उनकी सभ्यता भी एक ही है।'

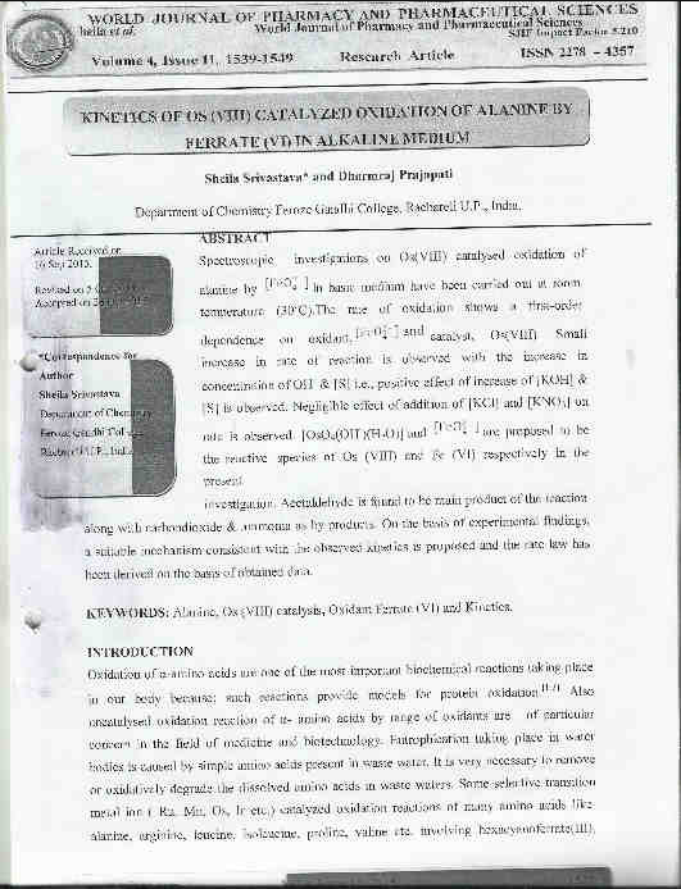
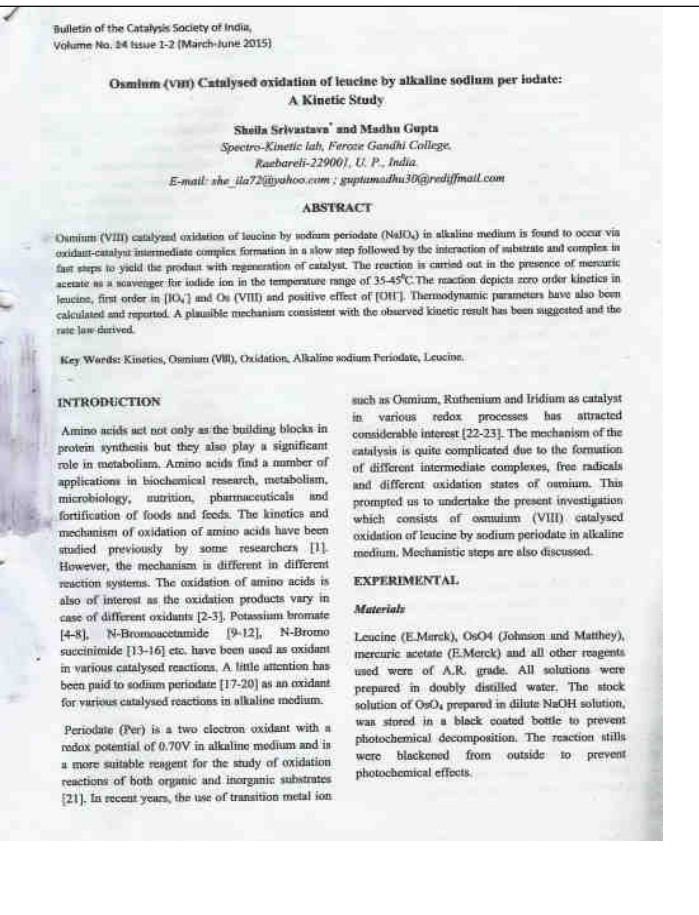
"अहिंसा की नींव पर रखे गये जीवन की योजना में जितना और जैसा अधिकार पुरुष को अपनी भविष्य की रचना का है, उतना और वैसा ही अधिकार स्त्री को भी अपना भविष्य तय करने का है। लेकिन अहिंसा समाज की व्यवस्था में जो अधिकार मिलते हैं, वे किसी-किसी कार्य या धर्म के माध्यम से प्राप्त होते हैं। इसलिए यह भी अपना मानना चाहिए कि सामाजिक आधार व्यवहार के नियम स्त्री और पुरुष दोनों आपस में मिलकर और समान-समान से तय हों।"

महात्मा गाँधी महिलाओं के मुठों को संबोधित करने वाले पहले व्यक्ति नहीं थे। सांस्कृतिक पुनर्जागरण और भारत में स्वतंत्रता के लिए राजनीतिक आंदोलन उन्नीसवीं सदी के आखिरी हिस्से में शुरू हो गया था। गाँधी के पदांगण से पहले महिलाओं के प्रति समाज सुधारकों का रुझान सामूहिकतापूर्ण होने के साथ-साथ संरक्षणवादी था। वे महिलाओं को सुरक्षा एवं सहायता प्रदान करने में विवश रहते थे। गाँधी के पदांगण के साथ महिलाओं के विषय में एक विशिष्ट नज़रिया भी नज़र आता है। उनके अनुसार स्त्री न तो पुरुष के भोगने की वस्तु है और न ही इंसान की प्रतिरोधी। गाँधी को सामाजिक अनुसार स्त्री में दो पुरुष के भोगने की वस्तु है और न ही इंसान की प्रतिरोधी। गाँधी को सामाजिक अनुसार स्त्री में दो पुरुष के भोगने की वस्तु है और न ही इंसान की प्रतिरोधी।

एवं राजनीतिक चिन्तन का अध्ययन से ऐसा प्रतीत होता है कि गाँधी एक नारीवादी विचारक हैं। उन्होंने नैतिक-वैयक्तिक मूल्यों के आधार पर स्त्री का निर्माण किया है। गाँधी ने स्त्री के लिए नैतिक-वैयक्तिक मूल्यों के आधार पर स्त्री का निर्माण किया है। गाँधी ने स्त्री के लिए नैतिक-वैयक्तिक मूल्यों के आधार पर स्त्री का निर्माण किया है।

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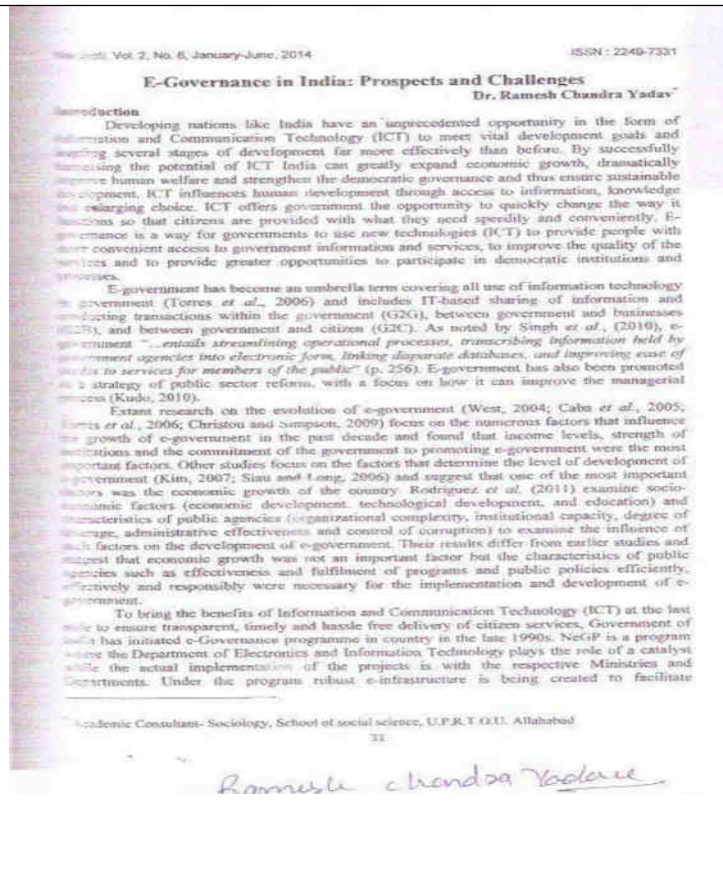


123	Name of the Author	Sheila Srivastava	 <p>WORLD JOURNAL OF PHARMACY AND PHARMACEUTICAL SCIENCES World Journal of Pharmacy and Pharmaceutical Sciences SJIET Impact Factor: 5.210 Volume 4, Issue 11, 1539-1549 Research Article ISSN 2278 - 4357</p> <p>KINETICS OF OS (VIII) CATALYZED OXIDATION OF ALANINE BY FERRATE (VI) IN ALKALINE MEDIUM</p> <p>Sheila Srivastava* and Dharmraj Prajapati Department of Chemistry, Ferroz Gandhi College, Raebareilly, U.P., India.</p> <p>ABSTRACT Spectroscopic investigations on Os(VIII) catalyzed oxidation of alanine by $[FeO_4]^{2-}$ in basic medium have been carried out at room temperature (30°C). The rate of oxidation shows a first-order dependence on oxidant, $[FeO_4]^{2-}$ and catalyst, Os(VIII). Small increase in rate of reaction is observed with the increase in concentration of OH⁻ & [S] i.e., positive effect of increase of [KOH] & [S] is observed. Negligible effect of addition of [KCl] and [KNO₃] on rate is observed. $[OsO_4(OH)(H_2O)]$ and $[FeO_4]^{2-}$ are proposed to be the reactive species of Os (VIII) and Fe (VI) respectively in the present investigation. Acetaldehyde is found to be main product of the reaction along with carbon dioxide & ammonia as by products. On the basis of experimental findings, a suitable mechanism consistent with the observed kinetics is proposed and the rate law has been derived on the basis of obtained data.</p> <p>KEYWORDS: Alanine, Os(VIII) catalysis, Oxidant Ferrate (VI) and Kinetics.</p> <p>INTRODUCTION Oxidation of α-amino acids are one of the most important biochemical reactions taking place in our body because such reactions provide models for protein oxidation [1]. Also uncatalyzed oxidation reaction of α-amino acids by range of oxidants are of particular concern in the field of medicine and biotechnology. Autooxidation taking place in water bodies is caused by simple amino acids present in waste water. It is very necessary to remove or oxidatively degrade the dissolved amino acids in waste waters. Some selective transition metal ions (i.e. Mn, Os, Ir etc.) catalyzed oxidation reactions of many amino acids like alanine, arginine, leucine, isoleucine, proline, valine etc. involving hexacyanoferate(III),</p>
	Title of the Paper/Vol./No./ Page	Kinetics of Os(VIII) catalyzed oxidation of Alanine by Ferrate(VI) in Alkaline Medium, Volume 4, Issue 11, 1539-1549	
	Department of the Teacher	Chemistry	
	Name of the Journal	World J. Of Pharmacy and Pharmaceutical Sciences	
	Year of Publication	2015	
	ISSN	2278- 4357	
	Link of the recognition in UGC enlistment of the Journal		
124	Name of the Author	Sheila Srivastava	 <p>Bulletin of the Catalysis Society of India, Volume No. 34 Issue 1-2 (March-June 2015)</p> <p>Osmium (VIII) Catalysed oxidation of leucine by alkaline sodium per iodate: A Kinetic Study</p> <p>Sheila Srivastava* and Madhu Gupta Spectro-Kinetic lab, Ferroz Gandhi College, Raebareilly-229001, U. P., India. E-mail: she_sia72@yahoo.com ; gupmamadhu30@rediffmail.com</p> <p>ABSTRACT Osmium (VIII) catalyzed oxidation of leucine by sodium periodate (NaIO₄) in alkaline medium is found to occur via oxidant-catalyst intermediate complex formation in a slow step followed by the interaction of substrate and complex in fast steps to yield the product with regeneration of catalyst. The reaction is carried out in the presence of mercuric acetate as a scavenger for iodide ion in the temperature range of 35-45°C. The reaction depicts zero order kinetics in leucine, first order in $[IO_4^-]$ and Os (VIII) and positive effect of [DH]. Thermodynamic parameters have also been calculated and reported. A plausible mechanism consistent with the observed kinetic result has been suggested and the rate law derived.</p> <p>Key Words: Kinetics, Osmium (VIII), Oxidation, Alkaline sodium Periodate, Leucine.</p> <p>INTRODUCTION Amino acids act not only as the building blocks in protein synthesis but they also play a significant role in metabolism. Amino acids find a number of applications in biochemical research, metabolism, microbiology, nutrition, pharmaceuticals and fortification of foods and feeds. The kinetics and mechanism of oxidation of amino acids have been studied previously by some researchers [1]. However, the mechanism is different in different reaction systems. The oxidation of amino acids is also of interest as the oxidation products vary in case of different oxidants [2-3]. Potassium bromate [4-8], N-Bromoacetamide [9-12], N-Bromo succinimide [13-16] etc. have been used as oxidant in various catalysed reactions. A little attention has been paid to sodium periodate [17-20] as an oxidant for various catalysed reactions in alkaline medium.</p> <p>Periodate (Per) is a two electron oxidant with a redox potential of 0.70V in alkaline medium and is a more suitable reagent for the study of oxidation reactions of both organic and inorganic substrates [21]. In recent years, the use of transition metal ion such as Osmium, Ruthenium and Iridium as catalyst in various redox processes has attracted considerable interest [22-23]. The mechanism of the catalysis is quite complicated due to the formation of different intermediate complexes, free radicals and different oxidation states of osmium. This prompted us to undertake the present investigation which consists of osmium (VIII) catalyzed oxidation of leucine by sodium periodate in alkaline medium. Mechanistic steps are also discussed.</p> <p>EXPERIMENTAL</p> <p>Materials Leucine (E.Merck), OsO₄ (Johnson and Matthey), mercuric acetate (E.Merck) and all other reagents used were of A.R. grade. All solutions were prepared in doubly distilled water. The stock solution of OsO₄ prepared in dilute NaOH solution, was stored in a black coated bottle to prevent photochemical decomposition. The reaction stills were blackened from outside to prevent photochemical effects.</p>
	Title of the Paper/Vol./No./ Page	Os(VIII) catalyzed oxidation of Leucine by Alkaline sodium periodate : A Kinetic Study”, Volume 14, Issue 1-2, 1-5	
	Department of the Teacher	Chemistry	
	Name of the Journal	Bulletin of Catalysis Society of India,	
	Year of Publication	2015	
	ISSN	1566-7367	
	Link of the recognition in UGC enlistment of the Journal		

125	Name of the Author	Dr. Atul Singh
	Title of the Paper/Vol./No./ Page	Woman in Bollywood
	Department of the Teacher	Hindi
	Name of the Journal	Everyone
	Year of Publication	April 2014
	ISSN	2277-5897
	Link of the recognition in UGC enlistment of the Journal	



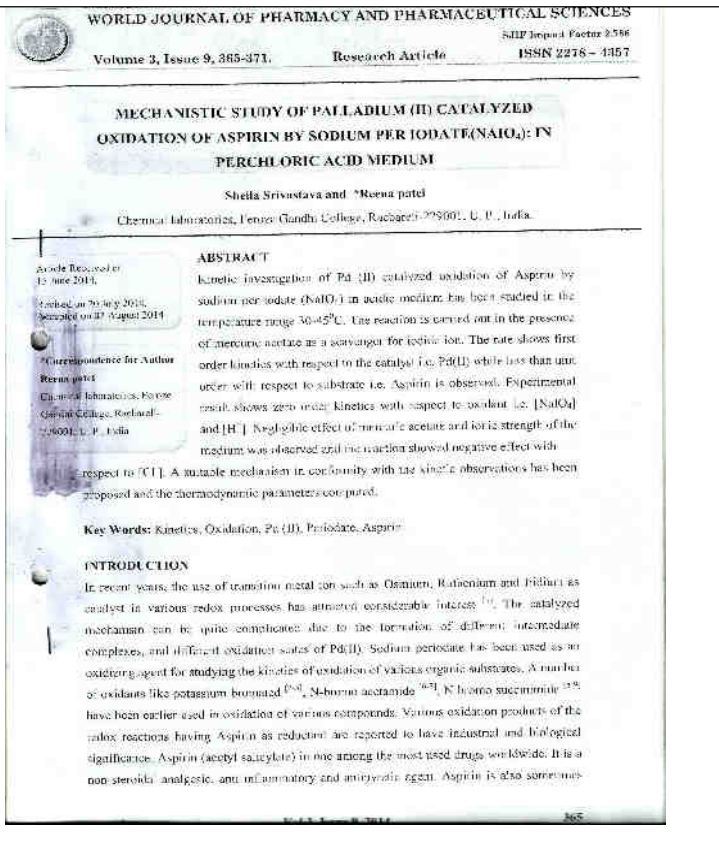
126	Name of the Author	Ramesh Chandra Yadav
	Title of the Paper/Vol./No./ Page	"E-Governance in India: prospects and challenges." pp31-36.
	Department of the Teacher	Sociology
	Name of the Journal	Navjoyoti (An International Refereed Research Journal January- June 2014)
	Year of Publication	2014
	ISSN	2249-7331
	Link of the recognition in UGC enlistment of the Journal	



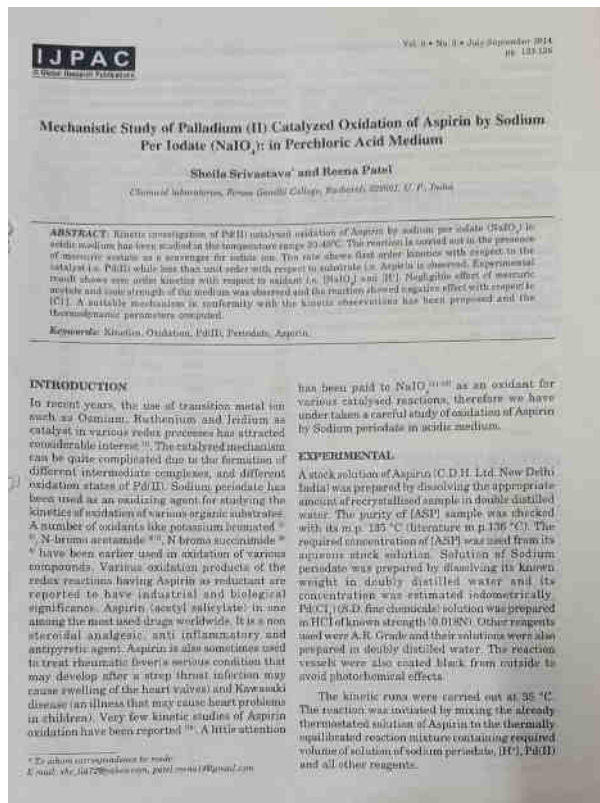
127	Name of the Author	Ramesh Chandra Yadav
	Title of the Paper/Vol./No./ Page	"Mokshadayini Ganga: A Sociological Perspective." pp 41
	Department of the Teacher	Sociology
	Name of the Journal	Global Green
	Year of Publication	2014
	ISSN	UPHIN/2013/52306
	Link of the recognition in UGC enlistment of the Journal	

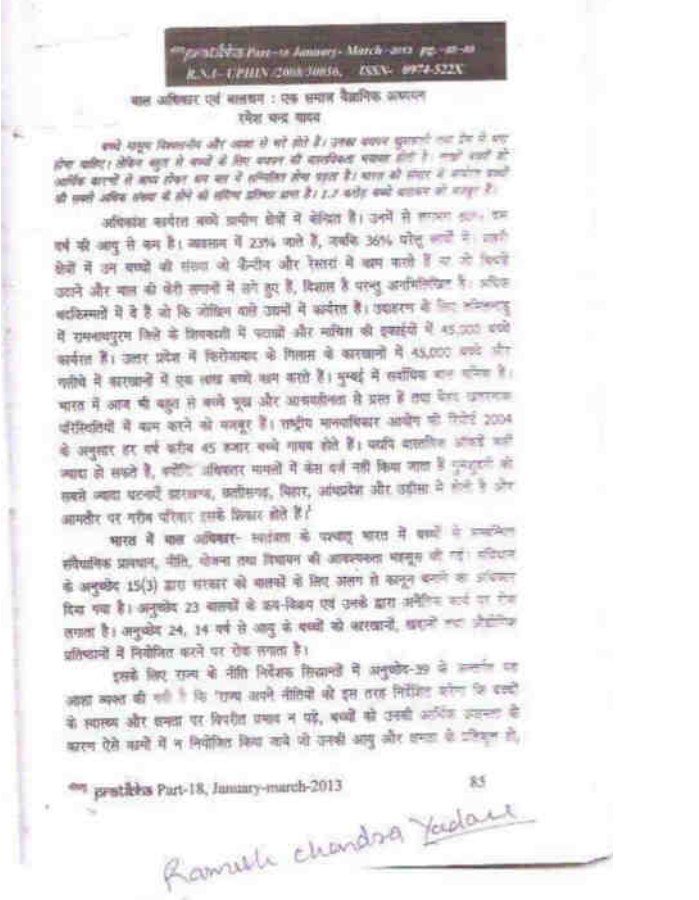


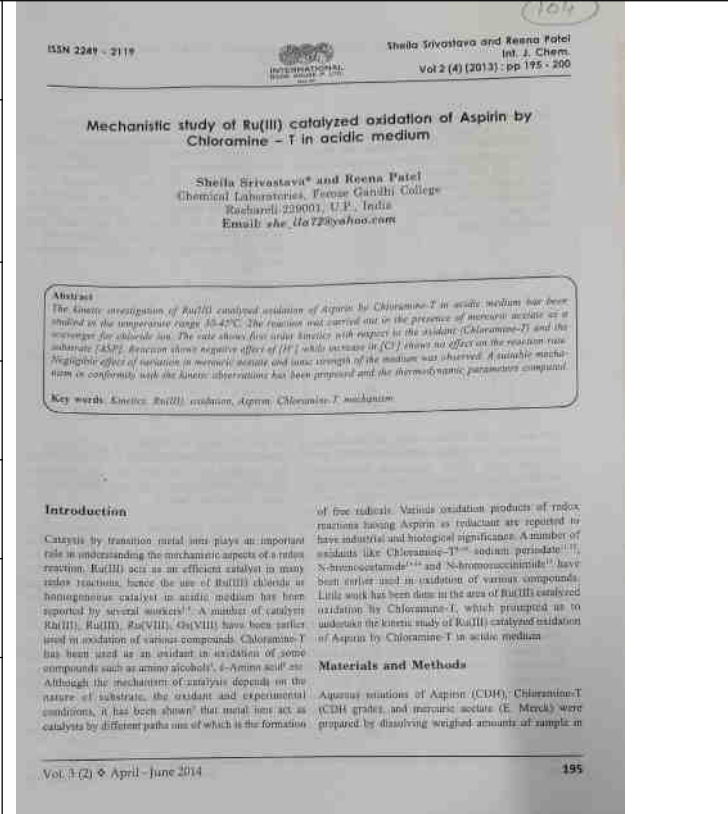
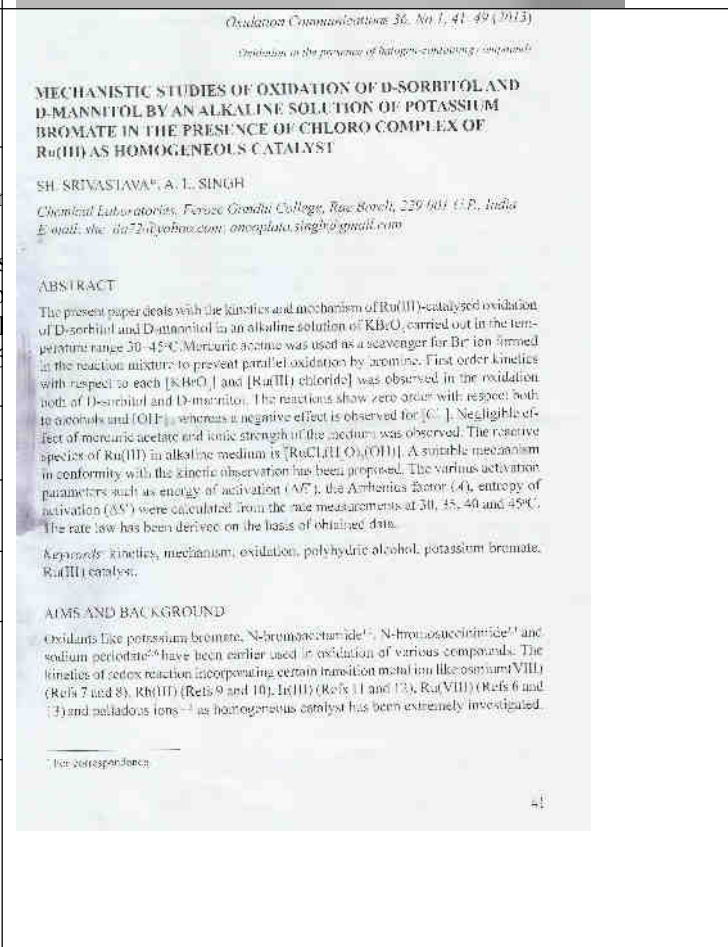
128	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Mechanistic study of Palladium(II)catalyzed oxidn of Aspirin by Sodium Periodate [NaIO ₄] in perchloric acid med,3(9),365-371
	Department of the Teacher	Chemistry
	Name of the Journal	World Journal of Pharmacy and Pharmaceutical Sciences
	Year of Publication	2014
	ISSN	2278- 4357
	Link of the recognition in UGC enlistment of the Journal	



129	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Mechanistic study of Pd(II) catalyzed oxidation of pharmaceutical drug by Sodium Periodate in acidic medium, 9(3), 123-126 .
	Department of the Teacher	Chemistry
	Name of the Journal	International Journal of Pure and Applied Chemistry
	Year of Publication	2014
	ISSN	0973-3876
	Link of the recognition in UGC enlistment of the Journal	
130	Name of the Author	Dr. Atul Singh
	Title of the Paper/Vol./No./ Page	Cinematic imperialism of multiplexes
	Department of the Teacher	Hindi
	Name of the Journal	Samved
	Year of Publication	May 2013
	ISSN	2231-3835
	Link of the recognition in UGC enlistment of the Journal	

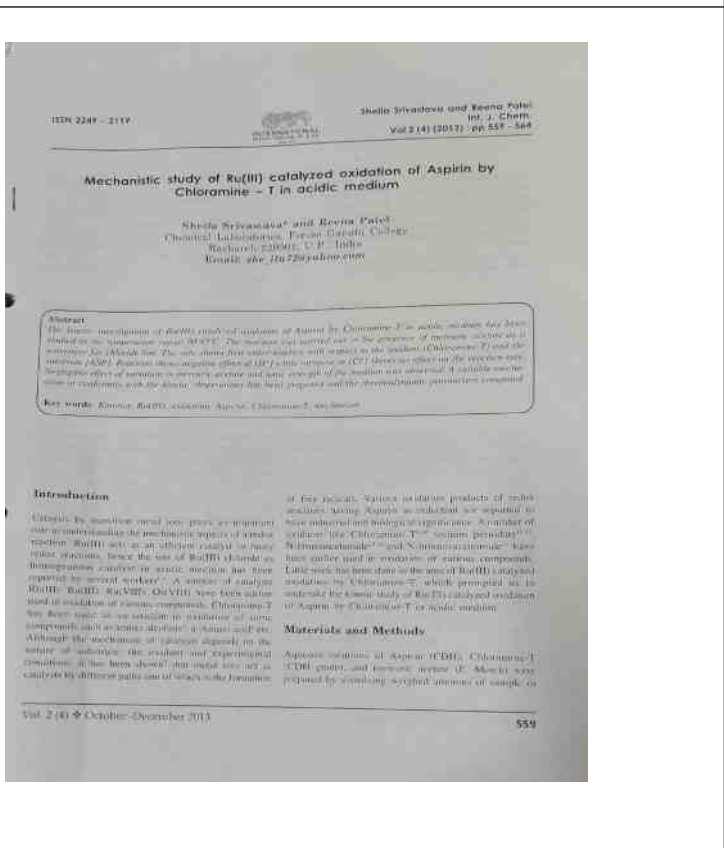
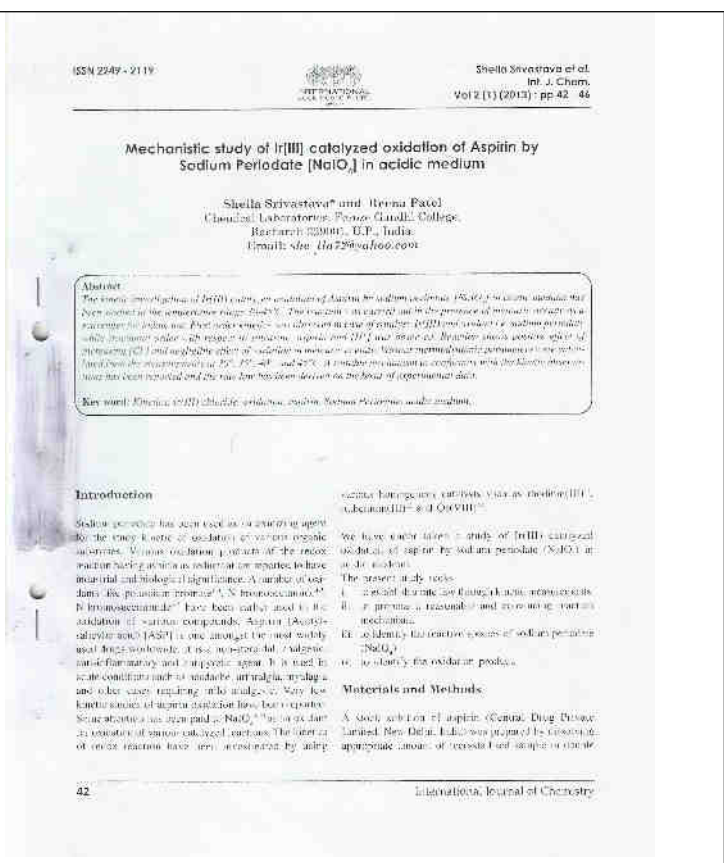


131	Name of the Author	Ramesh Chandra Yadav	
Title of the Paper/Vol./No./ Page	"Child Rights and Child Labour: A Social Scientific Study". pp. 85-89		
Department of the Teacher	Sociology		
Name of the Journal	Shri Prabhu Pratibha		
Year of Publication	2013		
ISSN	0974- 522X		
Link of the recognition in UGC enlistment of the Journal			
132	Name of the Author	Dr. Surjan Yadav	<p style="text-align: center;">महात्मा गाँधी की शिक्षा दृष्टि : वर्तमान आवश्यकता</p> <p style="text-align: center;">सुरजन यादव शोध छात्र, दर्शन एवं धर्म विभाग, काशी हिन्दू विश्वविद्यालय, वाराणसी</p> <p>'बसुंधेव कुरुम्बकन की घोषणा करने वाली भारत भूमि ने अनेक महापुरुषों को पैदा किया है, जिससे समय-समय पर समाज को नई दिशा एवं गति प्राप्त हुई। महात्मा गाँधी इस परम्परा के ही एक कड़ी थे, जिन्होंने भारतीय जनमानस के सर्वांगीण विकास के निमित्त एक सक्षम मार्ग प्रदान किया। अपने दीर्घकालीन सार्वजनिक जीवन में उन्होंने अनेक प्रकार की राजनैतिक, सामाजिक, आर्थिक, शैक्षणिक, धार्मिक तथा आध्यात्मवादी दृष्टिकोण के अनुसार इसके संबंध में गंभीरतापूर्वक विचार किया। इन्हीं चिन्तनों के क्रम में ज्ञान व विकास के आधार रूप माध्यम शिक्षा पर गाँधी जी ने अपने विचार व्यक्त किए जिनके द्वारा उन्होंने अपनी आध्यात्मिक दृष्टि व व्यावहारिक जीवितता को साकार रूप देने का प्रयास किया।</p> <p>आज विकास और नवाचार की नयी शताब्दी की ओर बढ़ने के लिए हमें सभी मोर्चों पर एक साथ आगे बढ़ने की जरूरत है। शिक्षा के क्षेत्र में हमें नयी संरचनाओं और विचारों के साथ ज्ञान की आवश्यकता है। महात्मा गाँधी के शिक्षा विचार ने इन्हीं आवश्यकताओं को व्यावहारिक रूप प्रदान कर आज प्रासंगिकता को प्राप्त किया है। गाँधी जी के अनुसार शिक्षा का अर्थ सिर्फ अक्षर का ज्ञान कराना ही नहीं है बल्कि वे उसकी सार्थकता पर बल देते हैं, जिससे कि वह अपनी मुक्ति को प्राप्त करने में अग्रसर हो।</p> <p>गाँधी जी ने कहा- "शिक्षा से मेरा तात्पर्य व्यक्ति के बुद्धि, शरीर व आत्मा का विकास है।" उनके शिक्षा दर्शन के चिंतन के अनुसार विद्या वह है जो मुक्ति दिलाने वाली हो "सा विद्या या विमुक्तये" की भावना का पालन करने वाली हो। ये बुद्धि, शरीर व आत्म के विकास को क्रियान्वित करने के लिए एक आत्मलुल परिवर्तन की बात करते हैं। "शिक्षा से मेरा अभिप्राय यह है कि बालक की या प्रौढ़ की शरीर, मन तथा आत्मा की उत्तम क्षमताओं को उदघाटित किया जाए और बाहर प्रकाश में लाया जाए। अक्षर ज्ञान न तो शिक्षा का अंतिम लक्ष्य है और न उसका आरम्भ। यह तो मनुष्य की शिक्षा के कई साधनों में से केवल एक साधन है। इसलिए मैं बच्चों की शिक्षा का श्रीगणेश उसे कोई उपयोगी दस्तकारी सिखाकर और जिस क्षण से वह अपनी शिक्षा का आरम्भ करे उसी क्षण से उसे उत्पादन के योग्य बनाकर करूँगी।"</p> <p>आज की शिक्षा व्यवस्था ज्ञान अथवा बुद्धि प्रधान हो गई है जिसमें सैद्धान्तिक पक्ष पर ज्यादा जोर दिया जाता है। परन्तु बापू ने इसकी व्यावहारिकता पर बल दिया और कहा कि बालकों को बचपन से ही उपयोगी</p>
Title of the Paper/Vol./No./ Page	Mahatma Gandhi's vision of education: current need		
Department of the Teacher	Philosophy		
Name of the Journal	Perspective		
Year of Publication	2013		
ISSN	2278-0602		
Link of the recognition in UGC enlistment of the Journal			

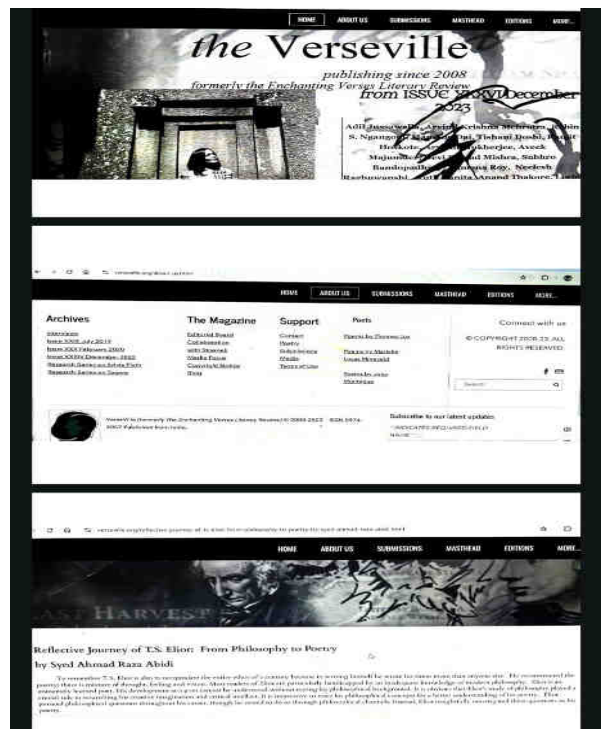
133	Name of the Author	Sheila Srivastava	
Title of the Paper/Vol./No./ Page	Mechanistic study of Ru(III)catalyzed oxidn of Aspirin by Chloramine-T in acidic medium, 2(4), 195-200		
Department of the Teacher	Chemistry		
Name of the Journal	International Journal of Chemistry		
Year of Publication	2013		
ISSN	2249- 2119		
Link of the recognition in UGC enlistment of the Journal			
134	Name of the Author	Sheila Srivastava	
Title of the Paper/Vol./No./ Page	Mechanistic Studies of Oxidation of D-sorbitol and D-mannitol by an Alkaline Solution of Potassium Bromate in the Presence of Chloro Complex of Ru(III) as Homogeneous Catalyst, 36(4), 41-49		
Department of the Teacher	Chemistry		
Name of the Journal	Oxidation Communications		
Year of Publication	2013		
ISSN	0209-4541		
Link of the recognition in UGC enlistment of the Journal			

135	Name of the Author	Sheila Srivastava	<p style="text-align: right;"><i>Oxidation Communications</i> 36, No. 1, 61–70 (2013)</p> <p style="text-align: right;"><i>Oxidation in the presence of Cr₂ and Cr-complexing compounds</i></p> <p>Ru(III) AND Ir(III) CATALYSIS IN OXIDATION OF BUTANOL BY QUINOLINIUM FLUOROCHROMATE. A COMPARATIVE STUDY</p> <p>SH. SRIVASTAVA*, P. SRIVASTAVA</p> <p><i>Chemical Laboratories, Pervez Gandhi College, 229 001 Raebareli, U.P., India</i> E-mail: she_11a72@yahoo.com; parul_9880@yahoo.com</p> <p>ABSTRACT</p> <p>Kinetic investigation in Ru(III) and Ir(III)-catalysed oxidation of butanol in an acidified solution of quinolinium fluorochromate (QFC) has been carried out in the temperature range of 30–45°C. First order kinetics was observed in case of catalyst Ru(III) as well as oxidant substrate (butanol). The order of reaction with respect to QFC was found to be zero. Increase in [Cl⁻] showed fractional positive order. The influence of [H⁺] and ionic strength on the rate was found to be insignificant. The main product of oxidation of butanol for both Ru(III) and Ir(III)-catalysed reactions was identified as butanaldehyde. The reaction has been studied in 10 different solvents. The first order rate constant had not been affected by the decrease in the dielectric constant of the medium. The values of rate constants observed at 4 different temperatures (30, 35, 40 and 45°C) were utilised to calculate the activation parameters. A suitable mechanism in conformity with the kinetic observations has been proposed and the rate law has been derived on the basis of the obtained data. A transient complex, formed between catalyst and substrate in a slow and rate-determining step, further reacts with QFC to give the products in a series of fast steps.</p> <p>Keywords: kinetics, oxidation, quinolinium fluorochromate, Ru(III)/Ir(III) chloride, butanol.</p> <p>AIMS AND BACKGROUND</p> <p>Halo chromates have been used as mild and selective oxidising reagent in synthetic organic chemistry. Quinolinium fluorochromate (QFC) is also one such compound. The kinetics of redox reactions involving homogeneous catalyst such as platinum group metals particularly osmium(VIII), iridium(III) and palladium(II) has been extensively investigated from mechanistic point of view. The use of Ru(III) chloride as a non-toxic and homogeneous catalyst has been reported by several workers¹⁻⁶. The mechanism</p> <p style="text-align: center;">* For correspondence.</p> <p style="text-align: right;">61</p>
	Title of the Paper/Vol./No./ Page	Ru(III) and Ir(III) Catalysis of Butanol by Quinolinium chromate. A Comparative Study”, 36(1), 61-70	
	Department of the Teacher	Chemistry	
	Name of the Journal	Oxidation Communications	
	Year of Publication	2013	
	ISSN	0209-4541	
	Link of the recognition in UGC enlistment of the Journal		
136	Name of the Author	Sheila Srivastava	<p>Bulletin of the Catalysis Society of India, Volume No. 12 Issue 2 June (2013)</p> <p style="text-align: center;">Mechanistic study of Ir(III) Catalyzed oxidation of Aspirin by Chloramine-T : In Acidic Medium</p> <p style="text-align: center;">Sheila Srivastava* Reena Patel, Pankaj Singh <i>Chemical laboratories, Pervez Gandhi College Raebareli-229001, U.P., India</i> she_11a72@yahoo.com</p> <p style="text-align: center;">ABSTRACT</p> <p>The kinetic investigation of Ir(III) catalyzed oxidation of Aspirin by chloramine-T (RNHCl) in acidic medium has been studied in the temperature range 30 to 45°C. The reaction is carried out in the presence of mercuric acetate as a scavenger for chloride ion. First order kinetics were observed in case of catalyst Ir(III) and oxidant i.e. chloramine-T. The reaction shows negligible effect with respect to substrate i.e. Aspirin [ASP], Hg(OAc)₂, [H⁺] and ionic strength of the medium. Reaction shows positive effect of increasing [Cl⁻]. A suitable mechanism in conformity with the kinetic observations has been proposed and the thermodynamic parameters were computed.</p> <p>Keywords: Kinetics, Ir(III) chloride, oxidation, Aspirin, Chloramine-T [RNHCl], Acidic medium.</p> <p>Introduction</p> <p>Iridium trichloride [Ir(III)] as a non-toxic and a homogeneous catalyst has been reported by several workers¹⁻⁶. Ir(III) chloride is an important platinum group metal ion and has been widely used in various redox reactions.¹¹ Chloramine-T [CAT](sodium N-chloro p-toluene sulfonamide) is the most important member of organic halo amine family and behaves as an oxidizing agent in both acidic and alkaline media. Chloramine-T is versatile oxidizing agent and has shown a variety of kinetic results due to formation of its various oxidizing species depending upon pH of the medium.^{10,12} Its versatile oxidizing nature is also due to halonium cations and nitrogen anions in their structure, which can act as both a base and Nucleophile. The prominent member of this class of compound is sodium-N chloro 4-methyl benzene sulfonamide, generally known as Chloramine-T [CAT]. Several reviews have been published on the oxidizing behavior of [CAT]¹⁰⁻¹² and number of publications focus on the mechanistic aspects of the redox reaction in acidic medium. In most of the studies one of the species,</p> <p>[CAT]. Various oxidation product of the redox reactions having Aspirin as reductant are reported to have industrial and biological significance. A number of oxidants like Potassium bromate¹³, N-bromoacetamide¹⁶⁻¹⁹, N-bromosuccinimide¹⁰ have been earlier used in oxidation of various organic compounds. Aspirin (Acetylsalicylic acid)[ASP] is one amongst the most used drugs world-wide. It is non steroidal, analgesic, anti inflammatory such as headache, arthralgia and other cases requiring mild analgesia. Very few kinetic studies of Aspirin oxidation have been reported.</p> <p>Experimental</p> <p>A stock solution of Aspirin(C.D.H. Ltd. New Delhi India) was prepared by dissolving the appropriate amount of recrystallised sample in double distilled water. The purity of [ASP] sample was checked with its m.p. 135°C (literature m.p.136°C). The required concentration of [ASP] was used from its aqueous stock solution. Solution of chloramine-T was prepared by dissolving its known weight in doubly distilled water and its concentration was estimated iodometrically. IrCl₃ (S.D. fine chemicals) solution</p>
	Title of the Paper/Vol./No./ Page	Mechanistic study of Ir(III) catalyzed oxidn of Aspirin by Chlor amine-T in acidic medium, 12(2), 28-34	
	Department of the Teacher	Chemistry	
	Name of the Journal	Bull. Catal. Soc. India,	
	Year of Publication	2013	
	ISSN	1566-7367	
	Link of the recognition in UGC enlistment of the Journal		

137	Name of the Author	Sheila Srivastava
Title of the Paper/Vol./No./ Page	Mechanistic study of Ir(III) catalyzed oxidation of Aspirin by Sodium Periodate $[NaIO_4]$ in acidic medium", 2(1), 42-46	Chemistry
Department of the Teacher	Chemistry	International Journal of Chemistry,
Name of the Journal	International Journal of Chemistry,	
Year of Publication	2013	
ISSN	2249- 2119	
Link of the recognition in UGC enlistment of the Journal		
138	Name of the Author	Sheila Srivastava
Title of the Paper/Vol./No./ Page	Mechanistic study of Ru(III)catalyzed oxidn of Aspirin in acidic medium, 2(4), 559-564	Chemistry
Department of the Teacher	Chemistry	International Journal of Chemistry
Name of the Journal	International Journal of Chemistry	
Year of Publication	2013	
ISSN	2249- 2119	
Link of the recognition in UGC enlistment of the Journal		



139	Name of the Author	Dr.S.A.R. Abidi
	Title of the Paper/Vol./No./ Page	Reflective Journey of T.S. Eliot:From Philosophy to Poetry
	Department of the Teacher	English
	Name of the Journal	The Enchanting Verses Literary Review
	Year of Publication	2012
	ISSN	0974-3057
	Link of the recognition in UGC enlistment of the Journal	www.verseville.org/refl-ective-journey-of-ts-eliot-fromphilosophy-to-poetry-by-syed-ahmad-raza-abidi.html



140	Name of the Author	Dr.S.A.R. Abidi
	Title of the Paper/Vol./No./ Page	Gandhian theme in Raja Rao's <i>Kanthapura</i>
	Department of the Teacher	English
	Name of the Journal	Ripples
	Year of Publication	2012
	ISSN	0973- 6352
	Link of the recognition in UGC enlistment of the Journal	

GANDHIAN THEME IN RAJA RAO'S *KANTHAPURA*

The novel *Kanthapura* has Raja Rao's in-depth understanding of swaraj struggle and its deeper consequences in the Indian citizens. *Kanthapura* is the story of how Gandhi's struggle for independence from the British came to a typical village *Kanthapura* in Southern India. The dramatic and vivid tale told by the old woman Rangamma evokes the spirit of India's traditional folk-epics and puranas. It is said that the novel is a landmark in the history of Indian fiction in English, as it points to a definite stage in the formation of an Indian style of writing in English. The Indian English novel reflects more or less the same patterns of growth as the novel in the regional languages. With the advent of the Gandhian Movement, along with the political consciousness, the creative sensibility stood classified under the impact of ideas and events of contemporary history, from the usable part to the contemporary and the complex destiny of Indian.

There is a rich corpus of novels dealing with the complex patterns of life in India. Older novelists like Mulk Raj Anand and R.K. Narayan have brought both width and coverage to the Indian English novel by incessantly drawing their inspiration from the Indian sources. Raja Rao, with his insistence on the Indian spirituality, brings into the Indian English novels a sense of metaphysical intensity and visionary emphasis. India as a way of life, a concept more than a country, is at the center of Raja Rao's work; the "matter" of India so conceived transforms the novels into something more than a documentary artifact, a symbolic art entailing myth and ritual. As K.R. Srinivas Iyengar points out:

Roughly contemporary with Mulk Raj Anand and R.K. Narayan, Raja Rao makes with them a remarkable triad, affiliated with them in time and sometimes in the choice of themes but not in his art as a novelist or in his enchanting prose style. A novelist and a short story writer, he too is a child of the Gandhian Age, and reveals in his work, his sensitive awareness of the forces, let loose by the Gandhian Revolution as also of the thwarting of steady pulls of past tradition ... his art is effectively tethered to his immutable ancient mooring with the strong invincible strings of his traditional Hindu culture. (386)

In dealing with the natural theme, a novelist reflects important differences in historical perspectives and narrative values. Raja Rao, for instance, goes beyond representational realism and naturalism and dramatizes the natural struggle as a mythic and symbolic event. His *Kanthapura* is a mythic soil, embedding in its structure the community's immemorial tradition and beliefs; it is a symbol of India, past, present and future. The main theme of the novel is the impact of the Gandhian freedom movement on the character of the people of *Kanthapura*.

Kanthapura presents the story of a South Indian village during the non-cooperation days. It deals with the theme of Gandhian impact on a village community. *Kanthapura* is narrated by the village grandmother by a series of happenings. Moorthy is a follower of Mahatma Gandhi. He advises people about 'Swaraja', 'Khaddar' etc. Jai Ramacharan's 'Hrikatha' too has the overtones of 'Swaraja'. Moorthy works for the uplift of the untouchables and becomes an enemy of the orthodox Hindus. He is ex-communicated by local guardians like Swami Aitnamanda, the great Vedantic philosopher. He is arrested for his nationalistic activities and sentenced to three months imprisonment. After having completed his term of imprisonment, Moorthy returns and starts his Civil Disobedience Campaign among the laborers whom he incites not to pay their taxes. Soon he wins the favour of the village community. The movement gains momentum and the police opens fire in the midst of 'Vandematram' and 'Inquilab Zindabad'. The theme of *Kanthapura* may be summed up as 'Gandhi and Our Villages' but the style of narration makes the book more a Gandhian-purana than a piece of mere fiction." The atmosphere of *Kanthapura* is sarcharged with nationalism. It is the story of 'Satyagrah Movement', 'lasti charge, and the rain that followed. The impact of Gandhi conveyed through Moorthy, transforms the life of an entire village community. All the people of the village play their part in the story. The story of *Kanthapura* is narrated by an old woman in "the ordinary style of our story telling". Making this simple and unlettered woman the narrator enables Raja Rao to bring the national and religious experiences together. To her Gandhi is God, and Moorthy is his 'Avatar' in the novel.

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141	Name of the Author	Dr.S.A.R. Abidi
	Title of the Paper/Vol./No./ Page	<i>Surfacing</i> -A Blue Print of Revolt
	Department of the Teacher	English
	Name of the Journal	Research Digest
	Year of Publication	2012
	ISSN	0973-6387
	Link of the recognition in UGC enlistment of the Journal	
142.	Name of the Author	Dr.S.A.R. Abidi
	Title of the Paper/Vol./No./ Page	Light From Many Lamps: Influences on Eliot
	Department of the Teacher	English
	Name of the Journal	The New Research
	Year of Publication	2012
	ISSN	2249-989X
	Link of the recognition in UGC enlistment of the Journal	

SURFACING - A BLUE PRINT OF REVOLT

Canadian Literature is quite rich and modern. Margaret Atwood is mainly known as a great novelist and champion of the cause of Canadian Literature. Her 'Survival' is a powerful manifesto of Canadian writing in general. Her poetry is mythopoetic, which presents less awareness of the myths of her land. She treats even the horrific with detachment. She presents in her poetry the horrors, paranoia and fears of the Canadian people. She expresses herself confidently and without any inhibitions. The poems of 'power politics' develop the theme of love as a game of 'Power Politics'. Atwood focuses on the binary of existential experience in Canada. Land and mind, wilderness and civilization, alienation and identity are the opposing elements.

Among leading Canadian novelists, Margaret Atwood has predominantly a feminist frame work and thus presents the problem of women. There is no denying the fact that Atwood is one among the few writers who has contributed immensely for the cause of women. This is quite evident in *Surfacing*. In *Surfacing* Atwood examines the life of smothered women to look at the other side of the woman who fought their way to freedom through art. The protagonist in *Surfacing* is a paralyzed artist. Her male teacher and fake-husband destroys her artistic integrity and motherhood. She becomes pregnant and experiences the trauma of abortion. She conceives again and is committed to bring up her future child as an ideal artist. The protagonist becomes an activist fighting against the victimization and oppression. *Surfacing* is concerned with the enigma of Canadian identity in the face of an American culture onslaught. Thus *Surfacing* is a blue print of revolt.

All cultures and societies, advantaged or disadvantaged, have power centres in their corpus. The marginalized groups or sections are consciously or unconsciously kept away from the power centers. They suffer from racist, ethnic, economic, social, gender related victimizations. The pangs of being marginalized are often expressed in literature. It will be right to point out that women do not enjoy equal status and individual dignity into male-oriented world. It makes them marginal socially, politically, sexually, and culturally. The women stand as marginalized and colonized. The feminist literature attempts to redress the age-old imbalance of women's subjugation. Atwood's *Surfacing* is an exhibition of the inner conflict of a Canadian woman who falls prey to power

politics of gender in a patriarchal society and to the impact of neo-colonialism of her land. The nameless protagonist suffers from humiliation and feels from the crude display of power by male over the female analogous to the power wielded over the land by the colonizers. She moves to her home place where she looks back to her roots and the past, for she realizes roots alone can validate her true identity. The protagonist therefore undertakes a journey to her native place with her friends under the pretext of searching her lost father.

Literature of marginality celebrates the rejected and the marginalized and attempts at defining the complicated identities of the victims of inequalities and deprivations practised against them. In *Surfacing*, the nameless protagonist's identity as a victim, a colonized, powerless subject makes her renege over her past and the intuition guides her to take the help of the past to understand the present status which in turn would be indispensable in shaping her future. In the novel, the protagonist prefers to remain nameless, tries to rebel against male domination and wishes to look back to revive her life. Atwood's women are not solitary weepers but make decision and seem ready to face any sort of difficulty. It is quite obvious, Atwood is a feminist at heart because she understands the true nature of women and champions their cause.

The protagonist who is nameless artist accompanied by her town and a married couple, returns to a small cabin in the wilderness of the north eastern Quebec, where she grew up. The protagonist is searching for her bossant father, who has disappeared. As the days pass, each character's individual ugliness

and weaknesses are exposed. The protagonist begins to drift in and out of reality, remembering painful episodes of her past. The novel is meditation on love and wildness.

In the *Surfacing*, protagonist distanced from her parents about nine year ago after the forced abortion. She was in a love with a man who exploited her innocence, made her pregnant and refused to marry. She was unable to face her parents after this disastrous incident. Actually, she is haunted by guilt complex. She even rejects that she could have resisted the forced abortion even though the fellow refused to marry her.

The protagonist felt that she did not respect her parents. She is almost forced to violate even the commandment of God "Honour thy parents." It leads her to an abnormal state. She is not in her senses. "To her Nothing is the same." She says, "I don't know the way any more" (6). She feels as if she has committed a crime. This guilt of sin leads her to doubt the very existence and a sense of alienation grips her. To her the world is divided between good and evil, victim and victor, princess and gladiator. There are only two things possible either a winner or a loser. "She is aware of psychic numbness and other restraints to picking herself with pins, pen nibs and compass points" (11). The protagonist feels powerless and insecure because of her experience and awareness of the prevailing social predicament. She collapses down but she finally bounces back. It is a sort of resurrection in her life.

Brooding on the binaries male/female, colonizer/colonized she feels a strong bond between her and her land. As "the history of patriarchy presents varieties of cruelties and barbarities" (Katz 46) on women, the history of colonialism violates the sanctity and freshness of of

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Light From Many Lamps: Influences on Eliot

—Syed Ahmad Raza Abidi

The influences on T.S. Eliot are many and varied, but he has not simply copied and parroted others. Eliot's perspicuous and agile mind digested numerous influences. His mind was so fine that it compressed everything into unity. There is a spark of unity radiating from his verse. In spite of multifarious influences, there is an identity of spirit, progression and development in his work.


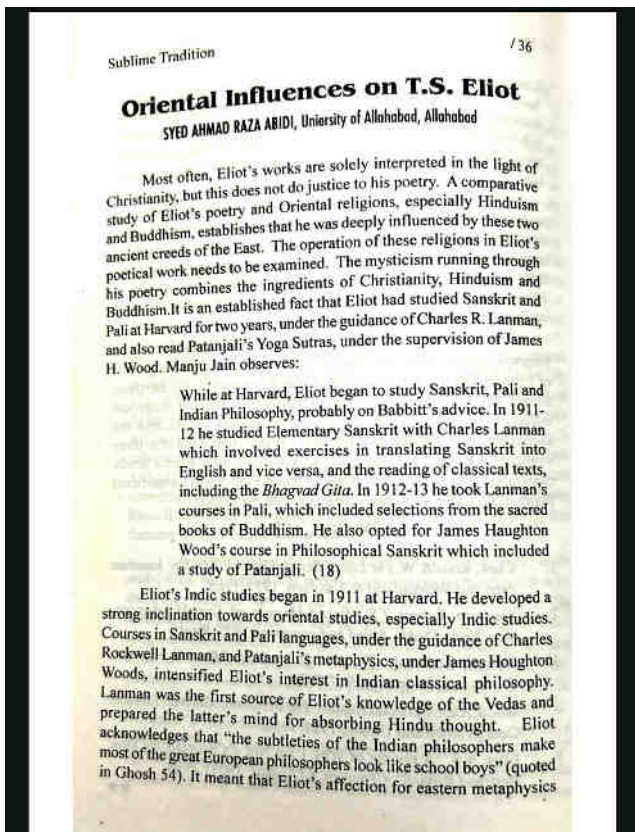
Besides the family and school where T.S. Eliot was educated, there were many poets, writers, critics and philosophers, of Europe and India, who went to make him what he was. Sumitra Kukreti has rightly pointed out:

The most formative period of his life was spent in St. Louis, and, also Harvard, where he came in contact with some of the great poets, philosophers and learned men of Europe, who, like Eliot's own family background, contributed largely towards establishing his point of view to the men and the world (01)

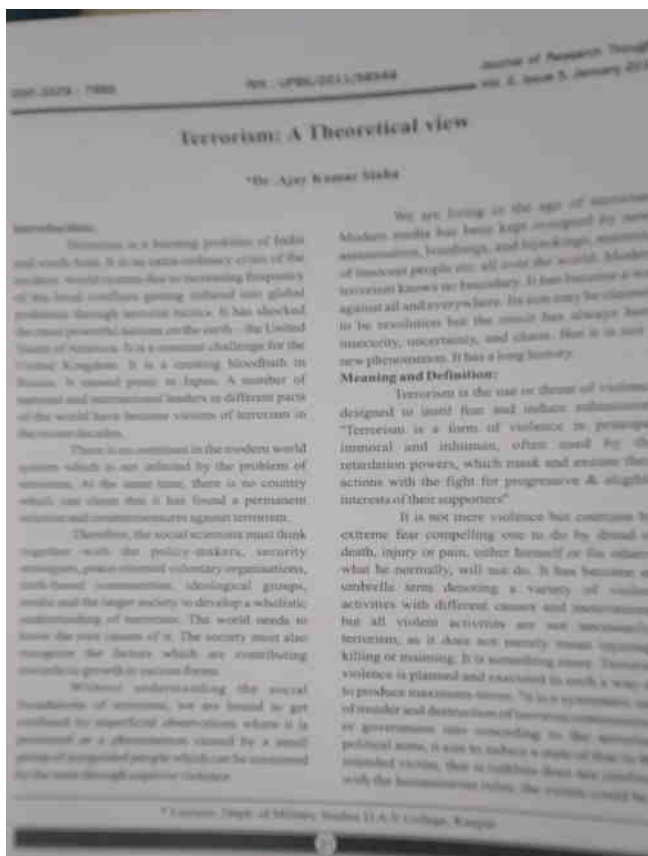
T.S. Eliot inherited three strangely-blended strains from his family—religious instinct, business talent and literary and artistic gifts— and this compound remained the most distinctive mark of genius in his later life which was spent, almost wholly, in London. Eliot's work of Emerson. Despite Henry Ware Eliot being a businessman, the whole family had deep interest in philosophy. T.S. Eliot himself asserts that in his family, the "philosophies of Schlegel, Emerson, Channing and Herbert Spencer were held in high regard" (quoted in Ghosh 14).

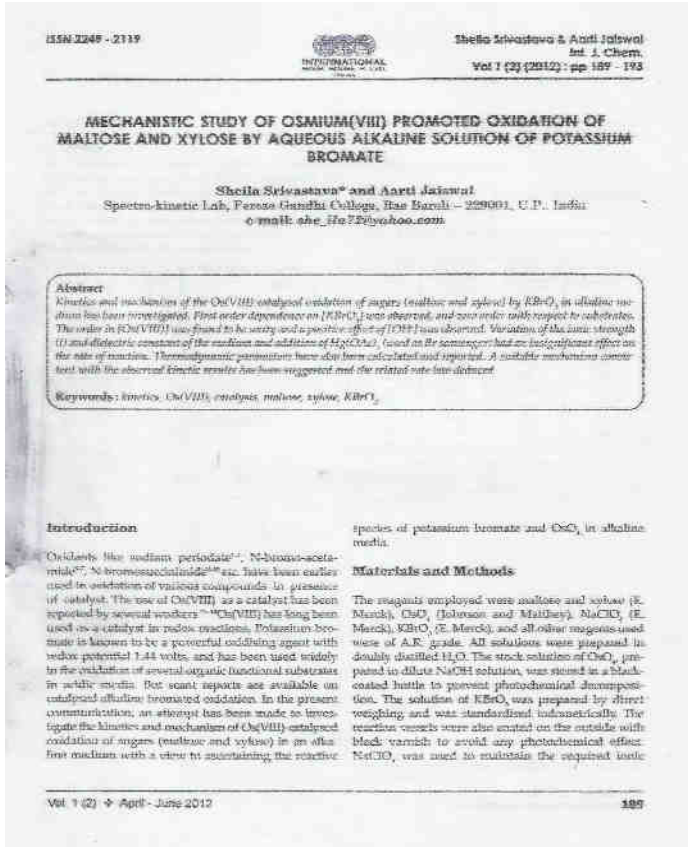

When Eliot was doing his graduation from Harvard University, he studied Sanskrit and Pali under Professor Charles Rockwell Lanman, a giant literary figure of those days. During inclination and the lectures which Eliot attended were concerned with French literary criticism: Confucius, Rousseau and contemporary religious movements. Babbitt was distinct in his unflinching defence of what he considered to be the values of reason and tradition and the past, as opposed to the anti-intellectualism of prevailing philosophy.

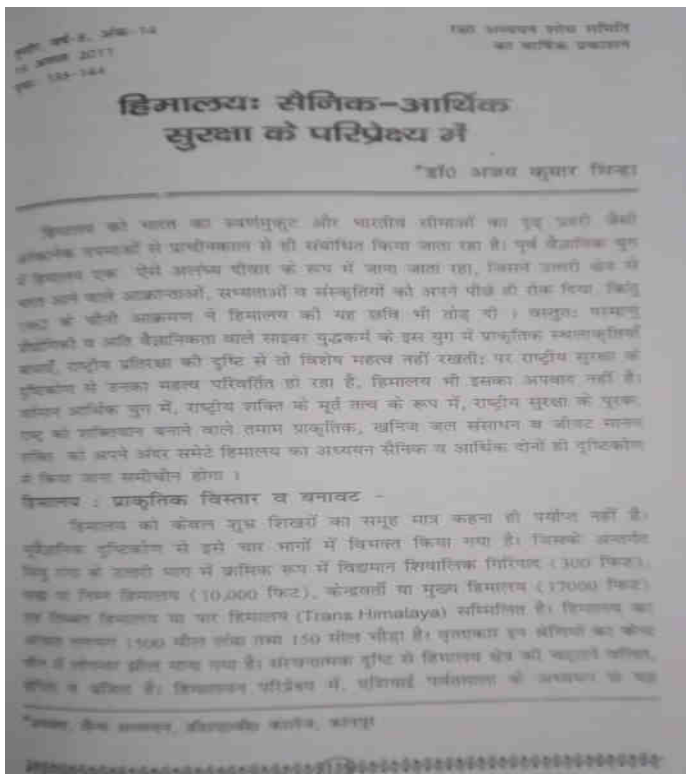
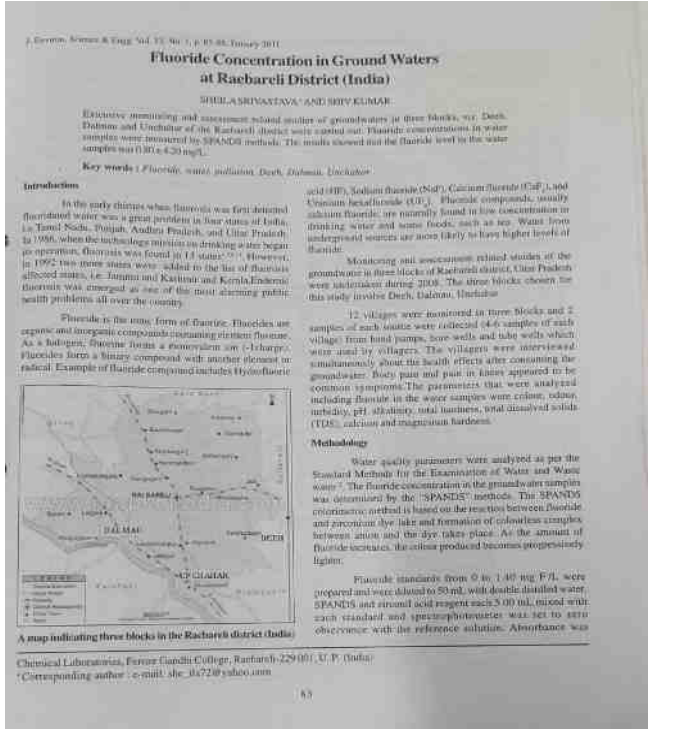
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143	Name of the Author	Dr.S.A.R. Abidi	
	Title of the Paper/Vol./No./ Page	Yeats and Eliot: Personality/Impersonality	
	Department of the Teacher	English	
	Name of the Journal	Glimpses	
	Year of Publication	2012	
	ISSN	2250- 0561	
	Link of the recognition in UGC enlistment of the Journal		
144	Name of the Author	Dr.S.A.R. Abidi	
	Title of the Paper/Vol./No./ Page	Oriental Influences on T.S.Eliot	
	Department of the Teacher	English	
	Name of the Journal	Sublime Tradition	
	Year of Publication	2012	
	ISSN	0976-3051	
	Link of the recognition in UGC enlistment of the Journal		

145	Name of the Author	Dr. Ajay Kumar Sinha
	Title of the Paper/Vol./No./ Page	Terrorism: A Theoretical View
	Department of the Teacher	Defence Studies
	Name of the Journal	International Journal of Research Thought
	Year of Publication	Jan. 2012
	ISSN	2229-7995
	Link of the recognition in UGC enlistment of the Journal	
146	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Ru(III) catalyzed mechanistic investigation of oxidn of cyclopentanol by NaIO ₄ in acidic medium: A kinetic approach, 2(2), 6-10,
	Department of the Teacher	Chemistry
	Name of the Journal	Int. J. Res. Physical Chem.,
	Year of Publication	2012.
	ISSN	
	Link of the recognition in UGC enlistment of the Journal	



147	Name of the Author	Sheila Srivastava	
	Title of the Paper/Vol./No./ Page	Mechanistic study of Osmium(VIII) promoted oxidation of maltose and xylose by aqueous alkaline solution of potassium bromate,1(2),189- 193	
	Department of the Teacher	Chemistry	
	Name of the Journal	Int. J. Chem.	
	Year of Publication	2012.	
	ISSN	2249- 2119	
	Link of the recognition in UGC enlistment of the Journal		
148	Name of the Author	Ramesh Chandra Yadav	
	Title of the Paper/Vol./No./ Page	"A Social Scientific Concept of Gender Discrimination." pp 7-14	
	Department of the Teacher	Sociology	
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	Year of Publication	2011	
	ISSN	0973-4201	
	Link of the recognition in UGC enlistment of the Journal		

149	Name of the Author	Dr. Ajay Kumar Sinha	
	Title of the Paper/Vol./No./ Page	Himalaya: In the context of military economic security	
	Department of the Teacher	Defence Studies	
	Name of the Journal	Tuneer	
	Year of Publication	Aug. 2011	
	ISSN	0974-2360	
	Link of the recognition in UGC enlistment of the Journal		
150	Name of the Author	Sheila Srivastava	
	Title of the Paper/Vol./No./ Page	Fluoride concentration in Ground waters at RaeBareli District (India) 53(1)85-88	
	Department of the Teacher	Chemistry	
	Name of the Journal	Journal of Environmental Science and Engineering	
	Year of Publication	2011	
	ISSN	0367-827X	
	Link of the recognition in UGC enlistment of the Journal		

151	Name of the Author	Sheila Srivastava	<p style="text-align: right;">Journal of Chemical Communications 24(10) 20-27 (2011)</p> <p style="text-align: center;"><i>Delimitation in the presence of pyrazosone bromate</i></p> <p>KINETICS AND MECHANISM OF OSMIUM(VIII)-CATALYSED OXIDATION OF SOME AMINO ACIDS (ALANINE, PROLINE) IN THE PRESENCE OF ALKALINE POTASSIUM BROMATE</p> <p>SH. SRIVASTAVA*, S. SINGH, P. SRIVASTAVA</p> <p><i>Spectro-Kinetic Laboratory, Feroze Gandhi College, 229-001 Rae Bareilly, U.P., India</i></p> <p><i>E-mail: she_11a72@yahoo.com; shalini.singh_15@yahoo.com</i></p> <p>ABSTRACT</p> <p>Kinetic investigation on osmium(VIII)-catalysed oxidation of amino acids (alanine, proline) by alkaline solution of potassium bromate (KBrO₃) in the presence of Hg(OAc)₂ as a scavenger for bromide ion has been carried out in the temperature range of 30–45°C. The reactions exhibit zero order kinetics with respect to the substrate (alanine, proline). The reaction follows first order dependence of the reaction both on KBrO₃ and Os(VIII). A negative effect of [OH⁻] on the rate of reaction has been found. Insignificant influence of ionic strength of the medium was observed. A suitable mechanism in conformity with the kinetic observations has been proposed and the activation parameters have been calculated.</p> <p>Keywords: kinetics, oxidation, Os(VIII), alanine, proline, alkaline potassium bromate.</p> <p>AIMS AND BACKGROUND</p> <p>Oxidants like sodium periodate¹⁻⁴, N-bromosuccinimide⁵⁻⁸, etc., have been earlier used in oxidation of various compounds in the presence of catalyst. The use of Os(VIII) as a catalyst has been reported by several researchers⁹⁻¹⁴. Scarcely attention has been paid to potassium bromate¹⁵⁻¹⁸ as an oxidant in various catalysed reactions in alkaline medium. The present paper deals with kinetics and mechanism of Os(VIII)-catalysed oxidation of some amino acids by potassium bromate in alkaline medium, in the presence of mercuric acetate as a scavenger.</p> <p>* For correspondence.</p> <p>20</p>
	Title of the Paper/Vol./No./ Page	Kinetics and mechanism of Osmium(VIII)Catalyzed oxidation of some amino acids (alanine,proline) in the presence of alkaline potassium bromate, 34(1), 20- 27).	
	Department of the Teacher	Chemistry	
	Name of the Journal	Oxidation communications	
	Year of Publication	2011	
	ISSN	0209-4541	
Link of the recognition in UGC enlistment of the Journal			
152	Name of the Author	Sheila Srivastava	<p style="text-align: center;">J. Chemtracks, 13 (1),173-178, 2011</p> <p style="text-align: right;">(ISSN-0973-239X)</p> <p>Palladium(II) catalyzed oxidation of glycine by chloramine-T: a kinetic study</p> <p>Sheila Srivastava*, Arti Jaiswal and Poojanjali Singh</p> <p>Chemical laboratories, Feroze Gandhi College Rae Bareilly-229001, U.P., India she_11a72@yahoo.com/arti.17sep@gmail.com</p> <p>[Received : March 03, 2011]</p> <p>Abstract : The kinetics of Palladium(II) catalyzed oxidation of glycine by Chloramine-T in acidic medium has been studied in the temperature range 30-45° C. The reaction is carried out in the presence of mercuric acetate as a scavenger for chloride ion. The rate shows first order kinetics with respect to the oxidant, i.e., chloramine-T and Pd(II) for glycine while positive effect with respect to substrate is observed. Negligible effect of mercuric acetate, H⁺ and ionic strength of the medium was observed and the reaction showed positive effect with respect to [Cl⁻] on the reaction rate. A suitable mechanism in conformity with the kinetics observations has been proposed and the thermodynamic parameters computed.</p> <p>(Key Words : Kinetics, Pd(II), oxidation, glycine, Chloramine-T.)</p> <p>Graphical abstract: Oxidation of Glycine by chloramine-T catalyzed by Palladium(II) in the perchloric acid has been studied and a suitable mechanism is proposed. The reaction follows first order in [Chloramine-T] and [Pd(II)], and positive effect with respect to substrate and [Cl⁻].</p> <p>Introduction</p> <p>Transition metal catalyzed reactions have created great interest due to their involvement in many important industrial processes, such as hydrogenation, carbonylation reactions and low-pressure polymerization of ethylene and propene. Palladium, which belongs to the group 10, forms a variety of complexes with different oxidation state ranging from 0 to +2, +4, +6. Amino acids are the most abundant class of organic compounds found in living organisms. Various oxidation products of the redox reactions having amino acids as</p> <p>reductant are reported to have industrial and biological significance. A number of oxidants like sodium periodate^{1,2}, N-bromosuccinimide^{3,4}, N-bromosuccinimide^{5,6} have been earlier used in oxidation of various compounds. The kinetics of redox reactions have been investigated by using various homogeneous catalysts such as rhodium(III)⁷, ruthenium(III)^{8,9}, ruthenium(VIII)¹⁰, osmium(VIII)¹¹, iridium(III)¹² but there are few reports available regarding studies in kinetics and mechanism of reaction using palladium(II) chloride as homogeneous catalyst.</p> <p>Experimental</p> <p>A stock standard solution of Chloramine-T (S.D. Fine Chem. Ltd) was prepared by dissolving its known weight in doubly distilled water and its concentration was estimated iodometrically. In order to avoid photochemical deterioration, the solution of chloramine-T was preserved in black coated water flask. The standard solution of glycine (E. Merck) was freshly prepared. PdCl₂ solution was prepared in HCl of known strength (0.018 N). Other reagents used were, AR Grade and their solutions were also prepared in doubly distilled water. The reaction vessels were also coated black from outside to avoid photochemical effects. The kinetic runs were carried out at 35±0.1°C. The reaction was initiated by mixing the already thermostated solution of glycine in the thermally equilibrated reaction mixture containing required volume of solutions of chloramine-T, H⁺, Pd(II) and all other reagents. Aliquots (5 ml) of the reaction mixture were</p>
	Title of the Paper/Vol./No./ Page	Palladium(II)catalyzed oxidn of glycine by Chloramine -T: A kinetic study, 13(1), 173-178,	
	Department of the Teacher	Chemistry	
	Name of the Journal	J. Chemtracks	
	Year of Publication	2011	
	ISSN	0973-239X	
Link of the recognition in UGC enlistment of the Journal			

153	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Mechanistic Aspects for the Oxidation of Ethylene Glycol by Potassium Bromate in Presence of Sodium Hydroxide Catalyzed by Chloro Complex of Ru(III) in its Nano Concentration Range as Homogeneous Catalyst: A Kinetic Approach, 6(1), 59-63
	Department of the Teacher	Chemistry
	Name of the Journal	International J. of Pure & Applied Chemistry
	Year of Publication	2011
	ISSN	0973-3876
	Link of the recognition in UGC enlistment of the Journal	

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Mechanistic Aspects for the Oxidation of Ethylene Glycol by Potassium Bromate in Presence of Sodium Hydroxide Catalyzed by Chloro Complex of Ru(III) in its Nano Concentration Range as Homogeneous Catalyst: A Kinetic Approach

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ABSTRACT: The present paper deals with the kinetics and mechanism of Ru(III) catalyzed oxidation of ethylene glycol in an alkaline solution of KBrO₃ carried out in the temperature range 40-45°C. Mercuric acetate has been used as a scavenger for Br⁻ ion formed in the reaction mixture to prevent parallel oxidation by bromine. First order kinetics with respect to each [KBrO₃] and [Ru(III) chloride] was observed in the oxidation of ethylene glycol. The reaction shows fourth order with respect to ethylene glycol and [OH⁻], whereas a negative effect is observed for [Cl⁻]. Negligible effect of mercuric acetate and ionic strength of the medium has been observed. The reactive species of Ru(III) in alkaline medium is [RuCl₂(H₂O)₂(OH)]⁻. A suitable mechanism in conformity with the kinetic observations has been proposed. The various activation parameters such as energy of activation (E[‡]), the Arrhenius factor (A), entropy of activation (S[‡]) etc. were calculated from the rate measurements at 30, 35, 40 and 45 °C. The rate has been derived on the basis of obtained data.

Keywords: Kinetics, mechanism, oxidation, polyhydric alcohol, potassium bromate, Ru(III) catalyst.

INTRODUCTION
Oxidants like Potassium bromate, N-Bromosuccinimide¹⁻³, N-Bromosuccinimide⁴⁻⁶ and sodium periodate⁷⁻⁹ have been earlier used in oxidation of various compounds. The kinetics of redox reaction incorporating certain transition metal ion like Osmium(VIII)^{10,11}, Ru(III)^{12,13}, Ir(III)^{14,15}, Ru(VIII)¹⁶ and Palladium ions^{17,18} as homogeneous catalyst has been extremely investigated. Potassium bromate (KBrO₃)¹⁹⁻²¹ has been used to oxidize various compounds in acidic medium both catalyzed and uncatalyzed^{22,23}. Scant attention has been paid to the activity of potassium bromate in presence of catalyst in alkaline medium. The use of Ru(III) as non toxic and homogenous catalyst has been reported by several researchers in acidic medium. This prompted us to undertake the present investigation, which is focused on the kinetics and mechanism of Ru(III) catalyzed oxidation of polyhydric alcohols by bromate in alkaline medium with mercuric acetate as a scavenger²⁴.

EXPERIMENTAL
Materials: An aqueous solution of ethylene glycol (Thomas Baker), Potassium bromate (BDH, AR), NaClO₄ and mercuric acetate (E. Merck) were prepared by dissolving the weighed amount of sample in triply distilled water. NaOH (S.D. Fine) was used as a source of OH⁻ ions. Ru(III) chloride (Johnson Matthey) was prepared by dissolving the sample in HCl of known strength. The reaction stills were blackened from outside to prevent photochemical effects. **Kinetics:** A thermostated water bath was used to maintain the desired temperature within ± 0.1 °C. Requisite volume of reagents, including substrate was taken in a reaction vessel and thermostated at 35 ± 0.1 °C for thermal equilibrium. A measured volume of potassium bromate solution, which was also maintained separately at the same temperature, was rapidly poured into the reaction vessel. The kinetics was followed by examining desired portion of reaction

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154	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Mechanistic study of Pd(II) catalyzed oxid. of ethylene glycol by periodate in aq. perchloric acid medium, 33(1), 70-76
	Department of the Teacher	Chemistry
	Name of the Journal	Oxidation Communication
	Year of Publication	2010
	ISSN	0209-4541
	Link of the recognition in UGC enlistment of the Journal	

Oxidation Communications 33, No. 1, 70-76 (2010)

MECHANISTIC STUDY OF PALLADIUM(II)-CATALYSED OXIDATION OF ETHYLENE GLYCOL BY PERIODATE IN AQUEOUS PERCHLORIC ACID MEDIUM

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ABSTRACT
The kinetics of palladium(II)-catalyzed oxidation of ethylene glycol by sodium periodate in acidic medium has been studied in the temperature range 36-45°C. The reaction is carried out in the presence of mercuric acetate as a scavenger for iodine ion. The rate shows first order kinetics with respect to the oxidant, i.e. sodium periodate and Pd(II) for ethylene glycol while zero order kinetics with respect to substrate is observed. Negligible effect of mercuric acetate and ionic strength of the medium was observed and the reaction showed negative effect with respect to [Cl⁻] and [H⁺] on the reaction rate. A suitable mechanism in conformity with the kinetic observations has been proposed and the thermodynamic parameters computed.

Keywords: Kinetics, Pd(II), oxidation, acidic sodium periodate

AIMS AND BACKGROUND
Oxidants like N-bromosuccinimide¹⁻³, potassium bromate⁴⁻⁶ etc. have been earlier used in oxidation of various compounds in the presence of catalyst. The Pd(II) homogeneous catalysis of periodate oxidation of ethylene glycol in perchloric acid has been studied. Some work has been reported on Pd(II)-catalyzed oxidation of sodium periodate in acidic medium⁷⁻⁹. This prompted us to undertake the present investigation on Pd(II)-catalyzed oxidation of ethylene glycol by periodate in acidic medium.

EXPERIMENTAL
Materials and methods: An aqueous solution of ethylene glycol (E. Merck), sodium periodate (S. D. Fine), sodium perchlorate and mercuric acetate (all E. Merck) were prepared by dissolving the weighed amount of sample in triply distilled water, perchloric acid (60% of E. Merck grade was used as a source of hydrogen ions. Pd(II) chloride (Qualigint) was prepared by dissolving the sample in hydrochloric acid of

* For correspondence.

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155	Name of the Author	Sheila Srivastava	<p style="text-align: right;"><i>Oxidation Communications</i> 33, No 3, 512-518 (2010)</p> <p>RUTHENIUM (III)-CATALYSED OXIDATION OF SOME SUGARS (D-GLUCOSE AND D-GALACTOSE) IN THE PRESENCE OF ALKALINE POTASSIUM BROMATE</p> <p>SH. SRIVASTAVA*, SH. SINGH, P. SRIVASTAVA <i>Spectrokinetic Laboratories, Feroze Gandhi College, 229 001 Raebareilly, U.P., India</i> <i>E-mail: she_sia72@yahoo.com, sheilini_singh_cham@yahoo.co.in</i></p> <p>ABSTRACT The kinetics of oxidation of two aldoses (D-glucose and D-galactose) by potassium bromate (KBrO₃) in the presence of an alkaline solution of RuCl₃ as a catalyst and Hg(OAc)₂ as a scavenger for bromide ion have been investigated in the temperature range of 30–45°C. The main products of the oxidation are the corresponding aldonic acids. The reaction rate is zero order with respect to aldoses and [Cl⁻]. The reaction follows first order dependence of the reaction both on KBrO₃ and Ru(III). A negative effect on the rate of reaction has been found on the successive addition of [OH⁻]. Insignificant influence of ionic strength of the medium was observed. A possible mechanism from the results of kinetic studies, reaction stoichiometry and product analysis has been proposed. Various activation parameters have been calculated.</p> <p>Keywords: kinetics, oxidation, Ru(III) chloride, D-glucose, D-galactose, alkaline potassium bromate.</p> <p>AIMS AND BACKGROUND The utility of ruthenium(III) chloride as a non-toxic and homogeneous catalyst has been reported^{1,2}. Potassium bromate (KBrO₃) has been used to oxidise various compounds in acidic medium^{3,4}. This prompted us to undertake the present investigation which is focused on the kinetics and mechanism of Ru(III)-catalysed oxidation of some aldoses by potassium bromate in alkaline medium, in the presence of mercuric acetate as a scavenger.</p> <p>EXPERIMENTAL Materials: Sodium perchlorate, potassium bromate, sodium hydroxide, D-glucose, D-galactose, mercuric acetate (E. Merck) were used as supplied without further purification.</p> <p>* For correspondence</p> <p>512</p>
	Title of the Paper/Vol./No./ Page	Ruthenium (III) catalyzed oxidation of some sugars (D-Glucose and D-Galactose) in presence of alkaline potassium bromate, 33(3), 512-518	
	Department of the Teacher	Chemistry	
	Name of the Journal	Oxidation Communication	
	Year of Publication	2010	
	ISSN	0209-4541	
	Link of the recognition in UGC enlistment of the Journal		
156	Name of the Author	Sheila Srivastava	<p style="text-align: center;">International Journal of Chemistry and Applications ISSN 0974-3111 Volume 2, Number 1 (2010), pp. 33–40 © International Research Publication House http://www.irphouse.com</p> <p style="text-align: center;">Bromate Oxidation of Glycine and Leucine using Chloro-complex of Ru(III) in its Nano Concentration Range as Homogeneous Catalyst : A Kinetic and Mechanistic Study</p> <p style="text-align: center;">Sheila Srivastava* and Arti Jaiswal</p> <p style="text-align: center;"><i>Kinetic Lab, Feroze Gandhi College, Rae Bareilly-229001, U.P., India</i> <i>*E-mail: she_sia@yahoo.com, arti.17nep@gmail.com</i></p> <p style="text-align: center;">Abstract</p> <p>Kinetics of oxidation of glycine and leucine by potassium bromate using chloro complex of Ru(III) in its nano concentration range as homogeneous catalyst have been investigated at 35° C for the first time. The reaction exhibits 1:1 stoichiometry (KBrO₃: amino acids). The reaction shows first order dependence on [KBrO₃] and [ruthenium (III)] and less than unit order in case of [amino acids] under the experimental conditions. The effects of added products, ionic strength and dielectric constant of the reaction medium have been investigated. The main products were identified by spot test. A mechanism involving the [HBrO₂] as the reactive species of the oxidant has been proposed. The active species of ruthenium(III) is understood as [RuCl₂]⁺. The reaction constants involved in the different steps of mechanism are calculated. The activation parameters with respect to the slow step of the mechanism are computed.</p> <p>Keywords: Kinetics, KBrO₃, Oxidation, Amino acids, Ruthenium(III), Catalysis</p> <p>Introduction Oxidative decarboxylation of amino acids is one of the well documented biochemical processes. Many reports are available in the recent literature on the kinetics of oxidation of amino acids by a variety of oxidants¹⁻³. Amino acids act not only as the building blocks in protein syntheses but they also play a significant role in metabolism. Amino acids can undergo many types of reaction depending on whether a particular amino acid contains non-polar groups or polar substituent. However exact</p>
	Title of the Paper/Vol./No./ Page	Bromate Oxidation of Glycine and Leucine using Chloro-complex of Ru(III) in its Nano Concentration Range as homogeneous catalyst : A kinetic and mechanistic study, 2(1), 33-40,	
	Department of the Teacher	Chemistry	
	Name of the Journal	Int. J. of Chem. & Application	
	Year of Publication	2010	
	ISSN	0974-3111	
	Link of the recognition in UGC enlistment of the Journal		

157	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Mechanistic study of Ir(III) and Hg(II) co-catalysed oxidation of mannitol alkaline N-Bromosuccinic 265-268
	Department of the Teacher	Chemistry
	Name of the Journal	International J. of Pure & Applied Chemistry
	Year of Publication	2010
	ISSN	0973-3876
	Link of the recognition in UGC enlistment of the Journal	

International Journal of Pure & Applied Chemistry 5(4), (October/November 2010) pp. 265-268

Mechanistic Study of Ir(III) and Hg(II) Co-Catalyzed Oxidation of Mannitol by an Alkaline N-Bromosuccinimide

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ABSTRACT: The kinetics of Ir(III) catalyzed oxidation of Mannitol in an alkaline medium by N-Bromosuccinimide has been studied in the temperature range 30-45 °C. The reaction was carried out in the presence of inorganic acetate which co-catalyses the reaction and the reaction rate follows a fractional positive order with respect to it. First order kinetics has been reported in case of catalytic Ir(III) dihalide. The rate showed fractional positive kinetics with respect to the oxidant as well as [Ir(III)] and [I⁻] variation in the saturation of Mannitol showed negligible impact on the reaction rate implying zero order with respect to substrate. Various activation parameters have been calculated. A suitable mechanism in agreement with observed kinetics has been proposed.

Keywords: oxidation, catalyst, mannitol, NBS, Iridium(III).

Introduction
Kinetics and mechanism of uncatalyzed oxidation of low sugars^{1,2}, acids³ and ketones⁴ by NBS, which was earlier used as a halogenating and oxidizing agent in the oxidation of several compounds, has been studied. N-Bromosuccinimide (NBS)^{5,6,7}, N-Chlorosuccinimide (NCA), chloramine-T (CAT), bromamine-T (B-T), potassium iodate^{8,9} and chloramine-B (CAB) have received substantial attention to clarify the mechanism of their reactions with several reducing substances in recent years. Very little attention has been paid to the mode of NBS oxidation. The kinetics of the redox reactions incorporating certain transition metal ions like osmium (VIII)¹⁰, ruthenium(III)¹¹, rhodium(III) and palladium(II)¹² as homogeneous catalyst has been extensively investigated from a mechanistic point of view. However, the reactions involving Iridium (III) chloride^{13,14} as homogeneous catalyst have been little investigated. This fact prompted us to undertake the present work which is the mechanistic study of Ir(III) and Hg(II) co-catalyzed oxidation of mannitol by alkaline NBS. Mechanistic steps are discussed.

Experimental
Materials
Aqueous solution of mannitol (E. Merck), NBS (G. P. S. Merck), Ir(III) (E. Merck) and Hg(II) (E. Merck) were prepared in triple distilled H₂O. Iridium Trichloride (Johnson Matthey) solution was prepared by dissolving 1g sample in HCl of known strength. The black coated reaction vessels were used to exclude photochemical effect.

Kinetics
A thermostated water bath was used to maintain the desired temperature within ± 0.1 °C. The reactions were initiated by addition of NBS solution in other reagents equilibrated separately at 25 °C. The progress of the reaction was monitored by determining unreacted NBS periodically at regular time intervals using starch as indicator.

Result and Discussion
Reaction mixture containing excess of N-Bromosuccinimide over mannitol in different ratios were allowed to equilibrate at 35 °C for 24 hours. The amount of unreactant oxidant showed that one mole of oxidant was consumed per mole of mannitol, according to the following stoichiometric equation.

For more reference see: <http://dx.doi.org/10.1002/ijpoc.10001>

158	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Kinetics and mechanism of oxidation of D-mannitol by potassium bromate in aq. Acidic medium, 1(1), 13-19
	Department of the Teacher	Chemistry
	Name of the Journal	Der Chemica Sinica
	Year of Publication	2010
	ISSN	0976-8505
	Link of the recognition in UGC enlistment of the Journal	

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Palgrave Research Library
Der Chemica Sinica, 1(1), 13-19

Kinetics and mechanism of oxidation of D-mannitol by potassium bromate in aqueous acidic medium

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ABSTRACT
Kinetic investigation of BrO₃⁻ catalyzed oxidation of D-mannitol in an acidified solution of potassium bromate in the presence of Hg(IV) as a co-oxidant, have been studied in the temperature range of 30° - 40° C. Increase in concentration of oxidant and H₂O₂ showed fractional positive order and fractional negative order respectively. The influence of Hg(IV) on the rate was studied. The rate was found to be independent of first order kinetics was observed in case of catalytic BrO₃⁻, Br₂ being its reactive species. The order of reaction with respect to substrate is zero. The various thermodynamic parameters were calculated from rate measurements at 30, 35, 40 and 45 °C, respectively. A suitable mechanism in conformity with the kinetic observations has been proposed and the rate law is derived on the basis of observed data.

Keywords: Kinetics, Oxidant, Potassium bromate, Mannitol, water, catalysis, rhodium (III).

INTRODUCTION
Mannitol is found in abundance in nature, particularly in exudates from trees, and in marine alga and fresh mushrooms. It is an isomer of sorbitol and is typically produced today by the hydrogenation of specialty glucose syrups. Mannitol is commercially available in variety of monomer and dimer form. In the United States, mannitol is provided by a number of manufacturers, including Cargill, Reynolds, Amcor, and SPI Polysols. Mannitol is water-soluble (even for sickle cell anemia). For this reason, it is often used as a dusting powder for chewing gum to prevent the gum from sticking to manufacturing equipment and containers. Due to its high melting point (165-169°C), mannitol is also used in chewable-flavored coating agents for ice cream and confections. It has a pleasant taste, is very stable to moisture, light and does not discolor at high temperatures, which makes mannitol ideal for use in pharmaceutical and nutritional tablets.

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159	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Mechanistic study of primary alcohols by Quinolinium Fluoro chromate using micro amount of chloro-complex of Ir(III) as a homogeneous catalyst in acidic med.,1(1),11-21
	Department of the Teacher	Chemistry
	Name of the Journal	Alfa Universal, An International J. of chemistry
	Year of Publication	2010
	ISSN	2229-4775
	Link of the recognition in UGC enlistment of the Journal	
160	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Aquachlororuthenium (III)catalyzed oxidation of some sugars by alkaline potassium bromate: A kinetic study, 1(2), 87-95
	Department of the Teacher	Chemistry
	Name of the Journal	Alfa Universal, An International J. of chemistry
	Year of Publication	2010
	ISSN	2229-4775
	Link of the recognition in UGC enlistment of the Journal	

Alfa Universal
An International Journal of Chemistry
Vol. 1 (1), 11-21 (2010)

Mechanistic study of oxidation of primary alcohols by Quinolinium Fluorochromate using micro-amount of chloro-complex of Ir(III) as a homogeneous catalyst in acidic medium

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(Received November 2, 2009; Accepted: December 4, 2009)

Abstract: The mechanistic study of Ir(III) catalyzed oxidation of *n*-hexanol and *n*-heptanol (primary alcohols) has been studied by quinolinium fluorochromate (QFC) in aqueous perchloric acid medium at 70±0.1 K. The reaction followed zero order kinetics with respect to [primary alcohols]. Pseudo-order kinetics with respect to [QFC] and [Ir(III)] were observed for the oxidation of primary alcohols. The rate of reaction decreased with increasing [Cl⁻]. The values of E_a and $\log k$ were obtained from the plot of $\log k$ vs. $1/T$ at different temperatures were utilized to calculate the activation parameters. The reaction between Ir(III) and primary alcohols in acidic medium exhibits 1:1 stoichiometry. A plausible mechanism conforming to the kinetic study has been proposed.

Keywords: Mechanistic Oxidation; Ir(III) complex; Acidic medium; Quinolinium; Primary alcohols.

Introduction:
An alcohol is an organic alcohol with a six carbon chain and a condensed structural formula of C₆H₁₃O. This colorless liquid is slightly soluble in water, but miscible with other acid chlorides. Many isomeric alcohols have the formula C₆H₁₃O. n-hexanol is believed to be a component of the odour of freshly mown grass. It is used in the perfume industry. n-hexanol is commonly used in cardiac electrophysiology experiments to block gap junctions and increase total resistance between myocytes. Increasing total resistance will decrease conduction velocity and increase the heart's susceptibility to reentrant excitation and sustained arrhythmias. n-hexanol has a pleasant smell and is used in cosmetics for its fragrance. Halochromes have been used as mild and selective oxidizing reagents in synthetic organic chemistry [1]. Quinolinium fluorochromate [2] (QFC) is also one such compound. The kinetics of redox reactions involving homogeneous catalyst such as platinum group metals (particularly Os(VIII), Rh(VIII), Ru(VIII) and Pd(II)) have been extensively investigated from mechanistic point of view. The role of Ir(III) chloride as a substrate and homogeneous catalyst has been reported by several workers [3-6]. The mechanism of reaction depends upon the nature of the oxidant nature of the substrate and the ways in which transition metal complex may play their role in order to provide the reactant molecules to the activated state before changing into final product under experimental conditions. The kinetic and mechanistic aspects of the oxidation by halochromates, a chromate(VI) species like Quinolinium fluorochromate (QFC), Quinolinium chlorochromate (QCC) and few reports on the mechanistic aspect of oxidation reactions of QFC are available in literature [7-10]. Scarcely any explanation was forthcoming in trying to rationalize the difference in kinetic behavior. It was thought worthwhile to study the kinetics and mechanism of Ir(III) catalyzed oxidation of primary alcohols by QFC, in order to study the kinetics with a view to examine the kinetic features of the reaction and establish the mechanistic pathways for the oxidation processes in the presence of different solvents with the aim to (i) ascertain and reactive species of catalyst and (ii) identify the oxidation products. (iii) validate a plausible reaction mechanism, and (iv) deduce the law consistent with kinetic results and calculate activation parameters.

Alfa Universal
An International Journal of Chemistry
Vol. 1 (2), 87-95 (2010)

Aquachlororuthenium(III) Catalyzed Oxidation of some Sugars by Alkaline Potassium Bromate : A kinetic Study

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(Received: January 21, 2010; Accepted: May 26, 2010)

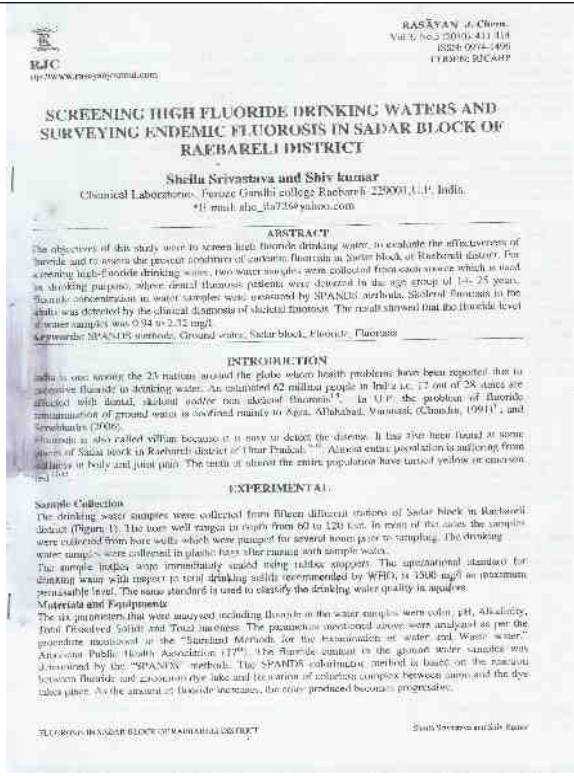
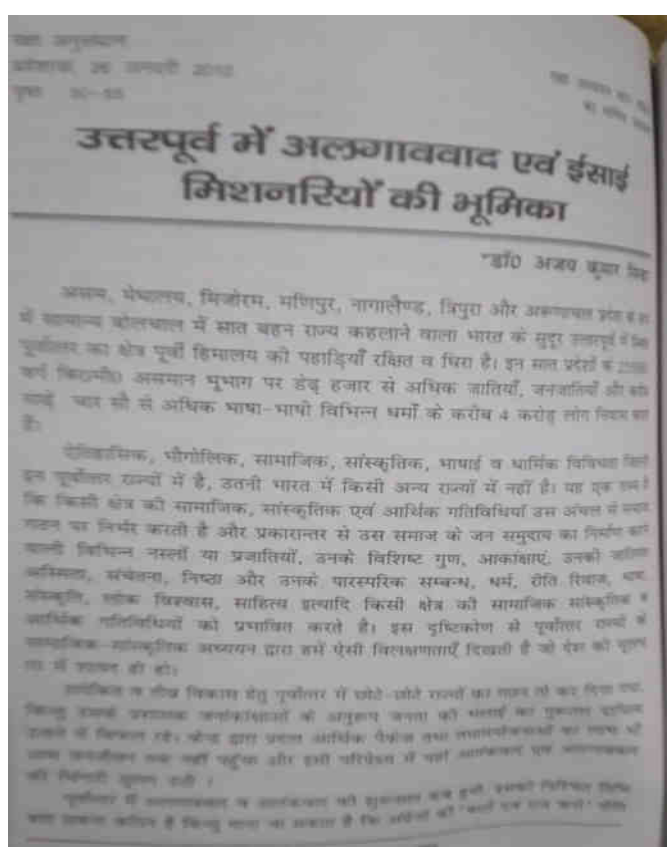
Abstract: Kinetic investigation in Ru(III) catalyzed oxidation of D-xylose and D-glucose in an alkaline solution of potassium bromate in the presence of potassium hydroxide as a co-oxidant for Ru³⁺ has been carried out at the temperature range 35-45°C. The rate shows first order dependence with respect to the bromate and second order with respect to the substrate (sugar). The reaction exhibits first order dependence on the catalyst (Ru(III)) and shows inverse order on the rate of reaction. Potassium hydroxide and acetic acid have a positive effect on the rate. Significant effect of change in MgSO₄ and CaCl₂ strength of the buffer salt, DCl, [RuCl₂(H₂O)₆]³⁺ and HClO₄ are the most reactive species. Ru(III) chloride and bromate, respectively. Galactonic acid and L-arabinonic acid have been identified as the main oxidation products of the reaction. Various oxidation pathways have been suggested and recorded. On the basis of experimental findings a plausible reaction mechanism consistent with the observed kinetics was proposed and the rate law has been proposed on the basis of obtained data.

Keywords: alkaline medium; kinetics; oxidation; potassium bromate; Ru(III) catalyzed; sugars

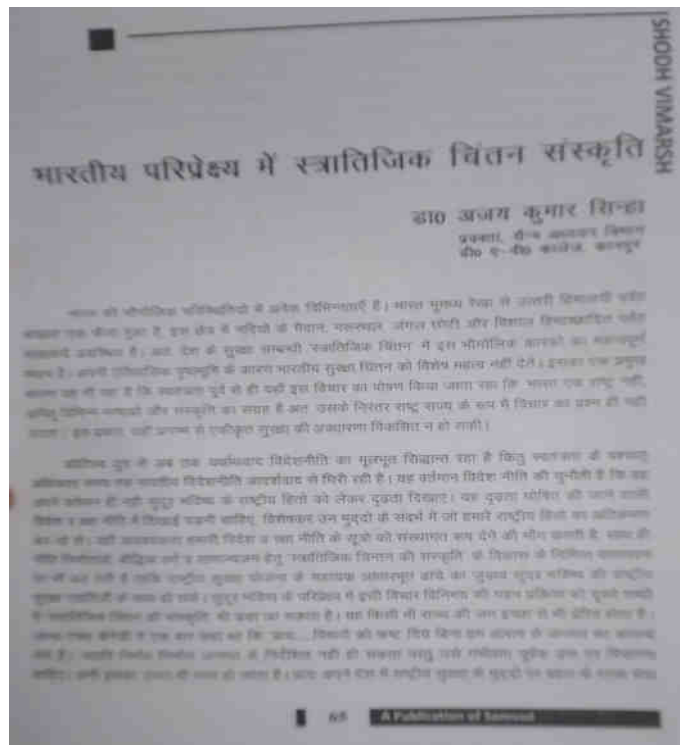
INTRODUCTION
Catalysis by transition metal ions, plays an important role in understanding the mechanistic aspects of a particular redox reaction. Ru(III) acts as an efficient catalyst in many redox reactions. Hence the use of potassium(III) chlorate as homogeneous oxidant in acidic medium. A variety of oxidants like potassium bromate [1-3], N-bromosuccinimide [5-8], N-bromosuccinimide [6,7], chloramine-T [3], and sodium periodate [9-10] have been earlier used in oxidation of various compounds. The kinetics of redox reactions incorporating certain transition metal ions like Cerium(IV) [11], cerium(III) [12], iridium(III) [13] and palladium(II) as homogeneous catalyst has been extensively investigated. However, reactions involving [14-15] have been little investigated and hardly any investigation has so far been reported to explain the catalytic role of ruthenium(III) chloride with potassium bromate as an oxidant in alkaline medium. This prompted us to undertake the

161	Name of the Author	Sheila Srivastava	<p>International Journal of Pure & Applied Chemistry 5(4), (October-December 2010) pp. 283-289</p> <p>Mechanistic Study of Oxidation of Primary Alcohols by Quinolinium Fluorochromate using Micro-amount of chloro-complex of Ir(III) as a Homogeneous Catalyst in Acidic Medium</p> <p>Sheila Srivastava* and Parul Srivastava Chemical Laboratories, Ferris Gandhi College, Rae Bareilly (U.P.)-229001, India</p> <p>ABSTRACT: The mechanistic study of iridium(III) catalyzed oxidation of n-hexanol and n-heptanol (primary alcohols) has been studied by quinolinium fluorochromate (QFC) in aqueous perchloric acid medium at 308 K. The reactions followed zero order kinetics with respect to primary alcohols. First-order kinetics with respect to [QFC] and [Ir(III)] were observed for the oxidation of primary alcohols. The rate of reaction decreased with increasing [Cl⁻]. The variation of pH and ionic strength of the medium had no significant effect on the rate of the reaction. The values of rate constants observed at four different temperatures were utilized to calculate the activation parameters. The reaction between QFC and primary alcohols, in acidic medium, exhibits 1:1 stoichiometry. A plausible mechanism conforming to the kinetic results has been proposed.</p> <p>Keywords: Mechanistic; Oxidation; Ir(III) catalyst; Acidic; quinolinium fluorochromate; Primary alcohols.</p> <p>Introduction: n-Heptanol is an organic alcohol with a six carbon chain and a condensed structural formula of CH₃(CH₂)₆OH. This colorless liquid is slightly soluble in water, but miscible with ether and ethanol. Many isomeric alcohols have the formula C₇H₁₆O. n-Heptanol is believed to be a component of the odour of freshly mowed grass. It is used in the perfume industry. n-Heptanol is commonly used in ecotoxicological experiments to block gap junctions and increase axial resistance between myocytes. Increasing axial resistance will decrease conduction velocity and increase the heart's susceptibility to reentrant excitation and sustained arrhythmias. n-Heptanol has a pleasant smell and is used in cosmetics for its fragrance. Halochromates have been used as mild and selective oxidizing reagent in synthetic organic chemistry [1]. Quinolinium fluorochromate [2] (QFC) is also one such compound. The kinetics of redox reactions involving homogeneous catalysts such as platinum group metals particularly Osmium(VIII), Ruthenium(III) and Palladium(II) have been extensively investigated from mechanistic point of view. The use of Ir(III) chloride as a non-toxic and homogeneous catalyst has been reported by several workers [3-6]. The mechanism of reaction depends upon the nature of the oxidant, nature of the substrate and the way in which transition metal complex ions play their role in order to promote the reaction molecules to the activated state before changing into final products under experimental conditions. The kinetic and mechanistic aspects of the oxidation by halochromates, a chromium(VI) species like Quinolinium fluorochromate (QFC), Quinolinium chlorochromate (QCC) and few reports on the mechanistic aspects of oxidation reactions of QFC are available in literature [7-10]. Nearly no explanation was forthcoming in trying to rationalize the difference in kinetic behavior. It was thought worthwhile to study the kinetics and mechanism of Ir(III) catalyzed oxidation of primary alcohols by QFC in acetone as a solvent, with a view to examine the kinetic features of the reaction and establish the mechanistic pathways for the oxidation processes in the presence of different solvents with aims to (i) ascertain real reactive species of catalyst and oxidant (ii) identify the oxidation products, (iii) elucidate a plausible reaction mechanism, and (iv) deduce rate law consistent with kinetic results and calculated activation parameters.</p> <p><small>* To whom all correspondence should be made: sheila73@yahoo.com; phone: 85801@yahoo.com</small></p>
Title of the Paper/Vol./No./ Page	Mechanistic study of primary alcohols by Quinolinium Fluorochromate using micro amount of chloro-complex of Ir(III) as a homogeneous catalyst in acidic medium, 5(4), 283-289,		
Department of the Teacher	Chemistry		
Name of the Journal	IJPAC		
Year of Publication	2010		
ISSN	0973-3876		
Link of the recognition in UGC enlistment of the Journal			
162	Name of the Author	Sheila Srivastava	<p><i>Oxidation Communications</i> 33, No 2, 408-415 (2010)</p> <p>MECHANISTIC INVESTIGATION OF Pd(II)-CATALYSED OXIDATION OF MALTOSE BY CHLORAMINE-T IN ACIDIC MEDIUM. A KINETIC STUDY</p> <p>SH. SRIVASTAVA, P. SINGH*</p> <p><i>Chemical Laboratories, Ferris Gandhi College, 229 001 Raebareilly, (U.P.) India</i> E-mail: pushpanjali08.ansg@yahoo.com</p> <p>ABSTRACT</p> <p>The kinetics of Pd(II) catalyzed oxidation of D-maltose by acidic solution of chloramine-T in the presence of mercuric acetate as a scavenger have been studied in the temperature range of 30-45°C. The oxidation product is maltoformic acid. The reaction is of first order in case of chloramine-T and Pd(II) both and order of reaction is zero with respect to maltose. The reaction shows less than unit order in case of [Cl⁻], while rate of reaction shows zero effect in case of [H⁺]. Negligible effect of mercuric acetate and ionic strength of the medium was observed. A transient complex, formed between PdCl₂ and chloramine-T, PdCl₂, being the reactive species of palladium(II) chloride, disproportionate in a slow and rate-determining step. Various activation parameters with respect to slow step of the mechanism are computed and discussed. A suitable mechanism in agreement with the observed kinetics has been proposed.</p> <p>Keywords: Pd(II) chloride, chloramine-T, D-maltose, HCl medium, catalytic oxidation.</p> <p>AIMS AND BACKGROUND</p> <p>Catalysis by transition metal ions in trace amounts is of recent interest. PdCl₂ acts as efficient catalyst both in acidic and basic medium because of the capacity of palladium ion to exist in more than one oxidation state. The kinetics and mechanism of palladium(II) catalyzed oxidation of some compounds by chloramine-T in perchloric acid medium has been reported. Chloramine-T has been used as an oxidant in oxidation of some compounds such as amino alcohols, α-amino acids, etc. The catalytic as well as inhibition action of Pd(II) in various redox reactions has been reported over the past decade; there has been a considerable interest on the speciation of aqueous PdCl₂ solutions and complexes⁸ of Pd(II) with Cl⁻ ions. The use of palladium(II) chloride</p> <p><small>* For correspondence.</small></p> <p>408</p>
Title of the Paper/Vol./No./ Page	Mechanistic investigation of Pd(II) catalyzed oxidn of maltose by chloramine-T in acidic medium : A kinetic study, 33(2), 408-415		
Department of the Teacher	Chemistry		
Name of the Journal	Oxid. Comm.		
Year of Publication	2010		
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163	Name of the Author	Sheila Srivastava	<p style="text-align: right;"><i>Oxidation Communications 33, No 2, 416-423 (2010)</i></p> <p>KINETIC INVESTIGATIONS ON THE Ru(III)-CATALYSED OXIDATION OF α-AMINO <i>n</i>-PENTANOIC ACID BY ACIDIC SOLUTION OF POTASSIUM BROMATE</p> <p>SH. SRIVASTAVA, P. SINGH*</p> <p><i>Chemical Laboratories, Feroze Gandhi College, 229 001 Raebareli, U. P., India</i> E-mail: pushpanjali.singh@yahoo.com</p> <p>ABSTRACT</p> <p>Kinetic investigations on Ru(III)-catalysed oxidation of di-valine by acidic solution of potassium bromate in the presence of mercuric acetate as a scavenger have been made in the temperature range of 30–45°C. The rate shows zero order kinetics in bromate $[\text{BrO}_3^-]$ and order of reaction is one with respect to substrate and Ru(III), respectively. Increase in $[\text{Cl}^-]$ showed positive effect, while $[\text{H}^+]$ showed zero effect. Negligible effect of mercuric acetate and ionic strength of the medium was observed. A transient complex, formed between $[\text{RuCl}_2]^{2+}$ and amino acid $([\text{RuCl}_2]^{2+}$ being reactive species of ruthenium (III) chloride in 1:1 ratio), disproportionates in a slow and rate-determining step. Various activation parameters have been calculated. A suitable mechanism in agreement with the observed kinetics has been proposed.</p> <p>Keywords: Ru(III), oxidation, α-amino <i>n</i>-pentanoic acid, potassium bromate</p> <p>AIMS AND BACKGROUND</p> <p>Potassium bromate has been earlier used as an oxidant in oxidation of some compounds¹⁻³ in acidic media. Scant attention has been paid to the activity of potassium bromate in the presence of catalyst in the acidic media⁴⁻¹⁰, but the results have not been interpreted so as to reveal a clear picture of the mode of catalysed process. The utility of ruthenium(III) chloride as a non toxic and homogeneous catalyst has been reported by several workers^{11,12}.</p> <p>This prompted us to undertake the present investigation, which consists of acid bromate oxidation of valine in the presence of ruthenium(III) chloride as a catalyst and mercuric acetate as a scavenger. Mechanistic steps are discussed.</p> <p>*For correspondence.</p> <p>416</p>
	Title of the Paper/Vol./No./ Page	Kinetic investigation on the Ru(III) catalyzed oxidn of α-Amino <i>n</i>-Pentanoic acid by acidic solution of Potassium bromate, 33(2), 416-423	
	Department of the Teacher	Chemistry	
	Name of the Journal	Oxid. Comm.	
	Year of Publication	2010	
	ISSN	0209-4541	
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164	Name of the Author	Sheila Srivastava	<p style="text-align: right;"><i>Oxidation Communications 33, No 2, 337-344 (2010)</i></p> <p>ACIDIC QUINOLINIUM FLUOROCHROMATE OXIDATION OF OXALIC AND MALIC ACIDS IN THE PRESENCE OF AQUACHLORO-RUTHENIUM(III) COMPLEX AS CATALYST: A KINETIC STUDY</p> <p>SH. SRIVASTAVA*, P. SRIVASTAVA, SH. SINGH</p> <p><i>Spectro-kinetic Laboratory, Feroze Gandhi College, 229 001 Raebareli, U. P., India</i> E-mail: sheila72@yahoo.com</p> <p>ABSTRACT</p> <p>Kinetic investigation in Ru(III)-catalysed oxidation of oxalic and malic acids in an acidified solution of quinolinium fluorochromate (QFC) has been carried out in the temperature range of 30–45°C. First order kinetics were observed in case of catalyst Ru(III) and oxidant QFC. The order of reaction with respect to substrate is zero. Increase in $[\text{Cl}^-]$ showed fractional positive order. The influence of $[\text{H}^+]$ and ionic strength on the rate was found to be insignificant. The main product of oxidation of oxalic and malic acids are carbon dioxide and oxoacid, respectively. The reaction has been studied in 10 different solvents. The various thermodynamic parameters were calculated from rate measurements at 30, 35, 40 and 45°C, respectively. A suitable mechanism in conformity with the kinetic observations has been proposed and the rate law is derived on the basis of obtained data. A transient complex is formed between Ru(III) and oxidant in a slow and rate-determining step, which further reacts with substrate to give the products in a series of first steps.</p> <p>Keywords: oxidation, oxalic acid, malic acid, quinolinium fluorochromate, Ru(III) chloride, acidic medium, mechanism.</p> <p>AIMS AND BACKGROUND</p> <p>Quinolinium fluorochromate (QFC) has been used as a mild and selective oxidising reagent in synthetic organic chemistry¹. Though few reports on the mechanistic aspects of oxidation reactions of QFC are available in literature²⁻⁴, nearly no explanation was forthcoming in trying to rationalise the difference in kinetic behaviour. The use of Ru(III) chloride as a non-toxic and homogeneous catalyst has been reported by several workers^{5,6}. It was thought worthwhile to study the kinetics and mechanism of</p> <p>*For correspondence.</p>
	Title of the Paper/Vol./No./ Page	Acidic Quinolinium Fluorochromate oxidn of oxalic and malic acids in the presence of aquachloro – ruthenium (III) complex as catalyst: A kinetic study, 33(2), 337-344	
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	Name of the Journal	Oxid. Comm.	
	Year of Publication	2010	
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165	Name of the Author	Sheila Srivastava	
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166	Name of the Author	Dr. Ajay Kumar Sinha	
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	Year of Publication	Jan. 2010	
	ISSN	978-904574-4-6	
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167	Name of the Author	Dr. Ajay Kumar Sinha
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	Name of the Journal	Research Discussion
	Year of Publication	Aug. 2010
	ISSN	0974-990X Vol. -4
	Link of the recognition in UGC enlistment of the Journal	

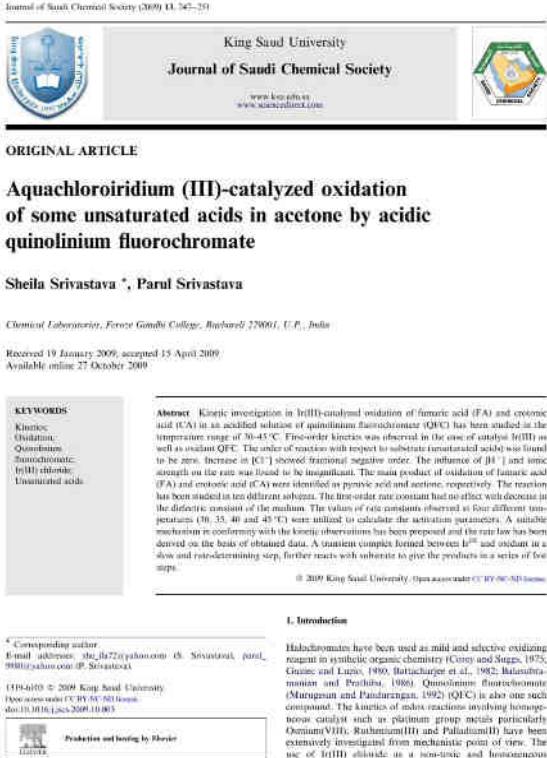
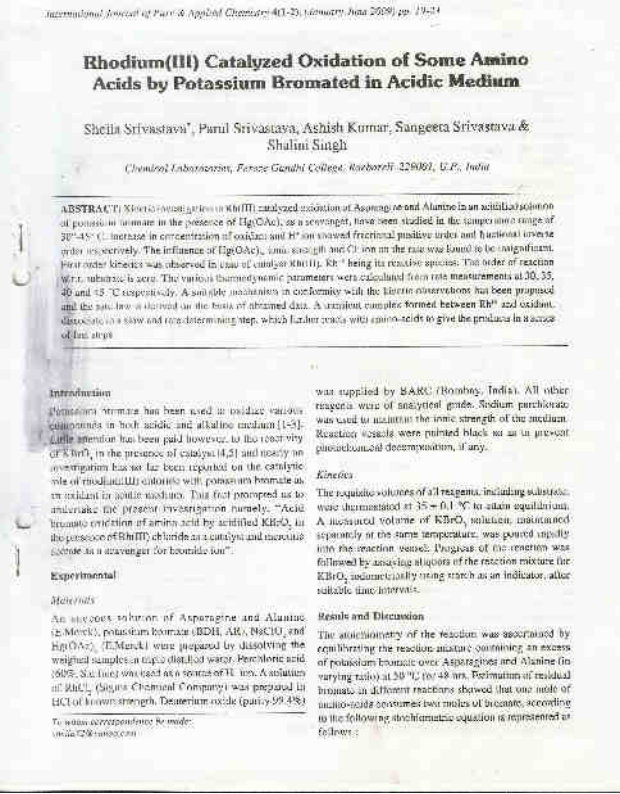


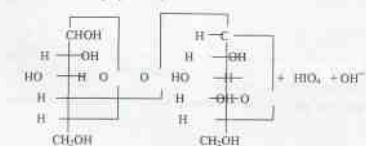
168	Name of the Author	Dr. Ajay Kumar Sinha
	Title of the Paper/Vol./No./ Page	Naxalism: A Threat to India's Internal Security
	Department of the Teacher	Defence Studies
	Name of the Journal	International Journal of Research Thought
	Year of Publication	2010
	ISSN	2229-7995
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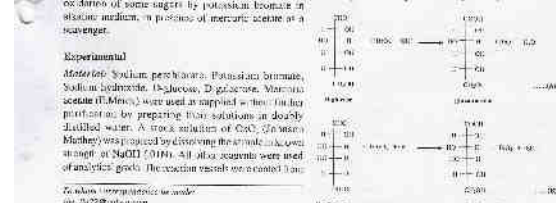


169	Name of the Author	Sheila Srivastava		<p>J. Indian Chem. Soc., Vol. 86, January 2009, pp. 19-22</p> <p>A kinetic study of Ru^{III} catalyzed oxidation of galactose and cyclopentanol by potassium bromate in alkaline medium</p> <p>Sheila Srivastava*, Parul Srivastava, Lakshmi Chandhary, Ashish Kumar and Shafiq Singh Chemical Laboratories, Feroze Gandhi College, Rae Bareilly-229 001, Uttar Pradesh, India E-mail : she_sri7@yahoo.com</p> <p>Manuscript received 22 June 2008; revised 8 February 2009; accepted 17 September 2009</p> <p>Abstract: The kinetics of Ru^{III} catalyzed oxidation of D(+)-galactose (gal) and cyclopentanol (cyp) by KBrO₃ in alkaline medium using mercuric acetate as a scavenger for Br₂ was studied as well as pseudo-first order kinetics with respect to oxidant and reactant in the temperature range 30-45 °C. The reaction exhibits first-order kinetics with respect to oxidant and reactant while zero-order kinetics with respect to substrate was observed in case of both galactose and cyclopentanol. For cyclopentanol, a positive effect on the rate of reaction was observed on successive addition of Hg(OAc)₂ and HCl whereas (OH⁻) exhibited an inverse fractional order. Increase of galactose, (OH⁻) and [Hg(OAc)₂] have no effect on the reaction velocity. A positive fractional order in mercuric acetate (AcOHg) and negligible effect of ionic strength of the medium were observed.</p> <p>The reactive species of Ru^{III} in alkaline medium is [RuCl₂(H₂O)₂(OH)]⁺ species and [RuCl₂(H₂O)₂(OH)]⁺ (scavenger) under the experimental pH range. A suitable mechanism in conformity with the kinetic observation has been proposed. The various activation parameters such as energy of activation (E_a), Arrhenius factor (A), entropy of activation (ΔS[‡]) were calculated from the rate measurements at 30, 35, 40 and 45 °C. A rate law has been derived on the basis of data obtained.</p> <p>Keywords: Ru^{III}, galactose, cyclopentanol, oxidation, kinetics.</p> <p>Introduction</p> <p>Oxidation in the sodium periodate^{1,2}, N-bromosuccinimide^{3,4}, N-bromosuccinimide^{5,6} etc. has been earlier used in oxidation of various compounds in presence of oxidant. Potassium bromate has been used as an oxidant in various catalyzed reactions⁷⁻⁹. The use of Ru^{III} catalyst as a catalyst has been reported by several workers in acidic medium, but this work has been reported on Ru^{III} catalyzed oxidation by potassium bromate in alkaline medium. This proposal is to undertake the present investigation of the kinetic study of Ru^{III} catalyzed oxidation of cyclopentanol and galactose by potassium bromate in alkaline medium with mercuric acetate as a scavenger.</p> <p>Experimental</p> <p>Materials: Aqueous solution of galactose and cyclopentanol (E. Merck), potassium bromate (R.D.H., S.R.), NaClO₄ and Hg(OAc)₂ (E. Merck) were prepared by dissolving the weighed amount of sample in triple distilled water; NaOH (S.D. Fine) was used as a source of OH⁻ ion. Ruthenium(III) chloride (Johnson Matthey) was prepared by dissolving the sample in HCl of known strength. The reaction mixtures were prepared fresh as far as to prevent photochemical effects.</p> <p>Kinetics: A thermostated water bath was used to maintain the desired temperature within ± 0.1 °C. Required volume of reagents including substrate, were taken in a reaction vessel and thermostated at 55 ± 0.1 °C for thermal equilibrium. A measured volume of KBrO₃ solution, which was also thermostated separately at the same temperature, was rapidly poured into the reaction vessel. The kinetics was followed by examining decolorized portions of reaction mixture for KBrO₃ colorimetrically using starch as an indicator after suitable time intervals.</p> <p>Results and Discussion</p> <p>The stoichiometric analysis of the oxidation of galactose and cyclopentanol with potassium bromate indicates that one mole of oxidant reacts with one mole of substrate. Thus, any all reaction may be represented as:</p>
170	Name of the Author	Sheila Srivastava		<p>International Journal of Pure & Applied Chemistry 4(3), (July-September 2009), pp. 231-235</p> <p>A Kinetic Study of Ru(III) Catalyzed Oxidation of Cyclohexanone by Potassium Bromate in Alkaline Medium</p> <p>Sheila Srivastava* and Lakshmi Chandhary Chemical Laboratories, Feroze Gandhi College, Rae Bareilly-229001, India</p> <p>ABSTRACT: The kinetics and mechanism of Ruthenium(III) catalyzed oxidation of cyclohexanone by potassium bromate in alkaline medium (KBrO₃) has been carried out in the temperature range 30° - 45° C. Mercuric acetate is used in the reaction mixture as a scavenger for Br₂ ion to prevent further oxidation by bromine. The reaction exhibits first order kinetics with respect to potassium bromate and substrate (cyclohexanone) and zero order kinetics with respect to oxidant (KBrO₃). The rate increases with increasing concentration of Cl⁻ and the reaction exhibits inverse effect on the rate of reaction. Significant effect of mercuric acetate and ionic strength of the medium was observed. Ruthenium(III) chloride has been reported to give a number of possible active species depending on the pH of solution. The reactive species of Ru(III) in alkaline medium is [RuCl₂(H₂O)₂(OH)]⁺ under the experimental pH range. A suitable mechanism in conformity with the kinetic observation has been proposed. The various activation parameters such as energy of activation (E_a), Arrhenius factor (A), entropy of activation (ΔS[‡]) were calculated from the rate measurements at 30°, 35°, 40°, and 45°C. A rate law has been derived on the basis of obtained data.</p> <p>Keywords: alkaline medium, cyclohexanone, Ru(III) catalyzed, KBrO₃, kinetic mechanism.</p> <p>Introduction</p> <p>Potassium bromate (KBrO₃) has been used to oxidize various compounds in acidic medium [1-5]. Special attention has been paid on the activity of KBrO₃ as the precursor of catalytic [6-9]. Potassium bromate has found application in pharmaceutical, organic chemistry as an oxidizing agent, and also to estimate various organic and inorganic compounds. Some kinetic investigations involving KBrO₃ as an oxidant with various compounds in both acidic and basic media have been carried out. However, kinetic results involving KBrO₃ as an oxidant in the presence of Ru(III) catalyst in alkaline medium have been little investigated. The use of Ru(III) as an oxidant and homogeneous catalyst has been reported by several workers [10-14] in acidic medium, but actually no work has been done to reveal the mode of catalyzed reaction in alkaline medium. Ruthenium species have also been widely used for catalyzed reactions. Ru(III) catalyzed oxidation of methyl glyoxal by Cr(VI) in perchloric acid by using mercuric acetate as oxidant.</p> <p>Experimental</p> <p>Aqueous solution of cyclohexanone (E. Merck), potassium bromate (R.D.H., A.R.), NaClO₄ and Hg(OAc)₂ (E. Merck) were prepared by dissolving the weighed amount of sample in triple distilled water. NaOH (S.D. Fine) was used as a source of OH⁻ ion. Ruthenium(III) chloride (Johnson Matthey) was prepared by dissolving the sample in HCl of known strength. The reaction mixtures were prepared fresh as far as to prevent photochemical effects.</p>

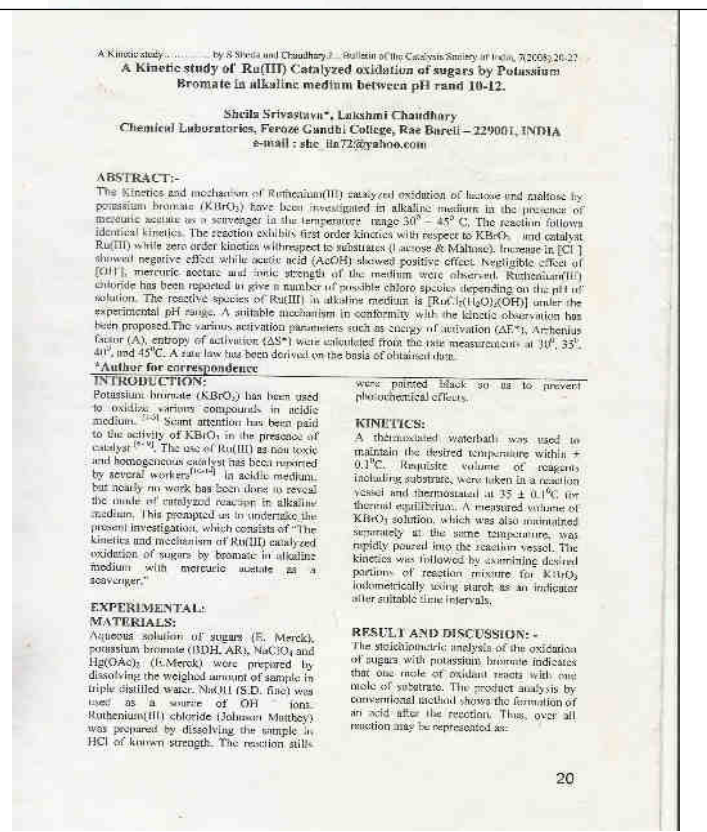
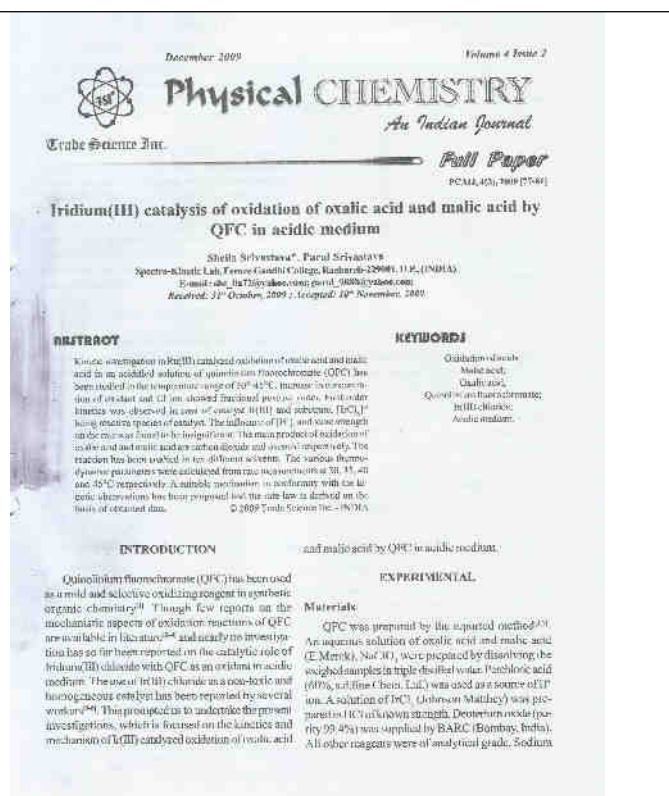
171	Name of the Author	Sheila Srivastava	<p style="text-align: right;"><i>Oxidation Communications 32, No 2, 349-354 (2009)</i></p> <p>KINETICS AND MECHANISM OF RHODIUM(III)-CATALYSED OXIDATION OF GLYCINE BY ACIDIFIED POTASSIUM BROMATE</p> <p>SH. SRIVASTAVA*, P. SRIVASTAVA, A. KUMAR, SH. SINGH <i>Chemical Laboratories, Feroze Gandhi College, 229 001 Raebareilly, U. P., India</i> <i>E-mail: she_17172@yahoo.com</i></p> <p>ABSTRACT</p> <p>The kinetics of rhodium(III)-catalysed oxidation of glycine in an acidified solution of KBrO_3 in the presence of $\text{Hg}(\text{OAc})_2$ as a scavenger, has been studied in temperature range of 30–45°C. The rate is first order in $\text{Rh}(\text{III})$ but zero order with respect to bromate. The rate decreases with increasing concentration of H^+ ion, showing negative effect, while positive effect is exhibited w.r.t. substrate (glycine) and AcOH. The influence of $\text{Hg}(\text{OAc})_2$, ionic strength and Cl^- ion on the rate was found to be insignificant. A suitable mechanism in conformity with the kinetic observations has been proposed and the rate law is derived on the basis of obtained data. The various thermodynamic parameters were calculated from rate measurements at 30, 35, 40 and 45°C, respectively.</p> <p><i>Keywords:</i> bromate, catalysis, oxidation, rhodium(III), acidified potassium bromate.</p> <p>AIMS AND BACKGROUND</p> <p>Potassium bromate has been used to oxidise various compounds¹⁻⁴. Little attention has been paid, however, to the reactivity of KBrO_3 in the presence of catalyst⁵ and no investigation has so far been reported on the catalytic role of rhodium(III) chloride with potassium bromate as an oxidant in acidic medium. This fact prompted us to undertake the present investigation, namely oxidation of glycine by acidified KBrO_3 in the presence of $\text{Rh}(\text{III})$ chloride as a catalyst and mercuric acetate as a scavenger for bromate ion.</p> <p>EXPERIMENTAL</p> <p><i>Materials.</i> Aqueous solutions of glycine (F. Merck), potassium bromate (BDH, AR), sodium perchlorate and $\text{Hg}(\text{OAc})_2$ (E. Merck) were prepared by dissolving the</p> <p>* For correspondence.</p>
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	Name of the Journal	Oxidation Communications	
	Year of Publication	2009	
	ISSN	0209-4541	
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172	Name of the Author	Sheila Srivastava	<p style="text-align: right;"><i>Oxidation Communications 32, No 3, 546-552 (2009)</i></p> <p>MECHANISTIC STUDY OF RUTHENIUM(III)-CATALYSED OXIDATION OF GALACTOSE BY ACIDIFIED POTASSIUM BROMATE</p> <p>SH. SRIVASTAVA*, A. KUMAR, P. SRIVASTAVA, SH. SINGH <i>Chemical Laboratories, Feroze Gandhi College, 229 001 Rae Bareilly, U. P. India</i> <i>E-mail: she_17172@yahoo.com</i></p> <p>ABSTRACT</p> <p>The kinetic investigation on ruthenium(III)-catalysed oxidation of galactose by potassium bromate in acidic medium has been done in the temperature range 30–45°C. The reaction is carried out in the presence of mercuric acetate as a scavenger for Br^- ion. The rate shows first order kinetics in the lower KBrO_3 concentration range tending to zero order at higher concentration. The order of reaction with respect to substrate is zero, but the order with respect to $\text{Ru}(\text{III})$ is one. Increase in $[\text{Cl}^-]$ shows negligible effect while increase in $[\text{H}^+]$ shows negative effect. Negligible effect of mercuric acetate and ionic strength of the medium was observed. A suitable mechanism in conformity with the kinetic observations has been proposed and the various thermodynamic parameters computed.</p> <p><i>Keywords:</i> $\text{Ru}(\text{III})$ catalyst, oxidation, galactose, potassium bromate.</p> <p>AIMS AND BACKGROUND</p> <p>Potassium bromate (KBrO_3) has been used to oxidise various compounds in acidic medium¹⁻⁴. The utility of ruthenium(III) chloride as a homogeneous catalyst has been reported by several workers⁵, but scant attention has been paid to explore catalytic role of ruthenium(III) chloride with potassium bromate as an oxidant. This fact prompted us to study the kinetics of ruthenium(III)-catalysed oxidation of galactose by potassium bromate in acidic medium and mercuric acetate as a scavenger.</p> <p>EXPERIMENTAL</p> <p>An aqueous solution of galactose (E. Merck), potassium bromate (BDH, AR), NaClO_4 and $\text{Hg}(\text{OAc})_2$ (E. Merck) was prepared by dissolving the weighed samples in triply distilled water. Perchloric acid (60% S.d fine) was used as a source of H^+ ion. A solution of RuCl_3 (Johnson Matthey) was prepared by dissolving the sample in</p> <p>* For correspondence.</p> <p>546</p>
	Title of the Paper/Vol./No./ Page	Mechanistic study of Ruthenium(III) catalyzed oxidation galactose by acidified KBrO_3, 32 (3), 546-552,	
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	Name of the Journal	Oxidation Communications	
	Year of Publication	2009	
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	Title of the Paper/Vol./No./ Page	Aquachloroiridium(III) catalyzed oxidation of some unsaturated acids in acetone by acidic quinolinium fluorochromate, 13 no.-2, 247-251	
	Department of the Teacher	Chemistry	
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	Year of Publication	2009	
	ISSN	1319-6103	
174	Name of the Author	Sheila Srivastava	
	Title of the Paper/Vol./No./ Page	Rh(III) Catalyzed Oxidation of Some Amino Acids by Potassium Bromate in Acidic Medium, 4, issue 1-2, 19-23,	
	Department of the Teacher	Chemistry	
	Name of the Journal	IJPAC	
	Year of Publication	2009	
	ISSN	0973-3876	
	Link of the recognition in UGC enlistment of the Journal		

175	Name of the Author	Sheila Srivastava	<p style="text-align: center;">Osmium(VIII) ... by Sheila Srivastava et al., Bulletin of the Catalysis Society of India, 8 (2009) 46-51</p> <p style="text-align: center;">OSMIUM(VIII) CATALYSIS OXIDATION OF MALTOSE BY SODIUM PERIODATE IN AQUEOUS ALKALINE MEDIUM: A KINETIC STUDY</p> <p style="text-align: center;">Sheila Srivastava* Arati Jaiswal, Sangeta Srivastava Chemical Laboratories, Ferroz Gandhi College, Rae Bareilly - 229001, U.P., India e-mail: sheila72@yahoo.com</p> <p>Osmium(VIII) catalyzed oxidation of Maltose by periodate in alkaline medium is found to occur via osmium-catalyst complex formation in a slow step followed by the intraction of substrate and complex in the fast step to yield the products with regeneration of catalyst. The reaction is carried out in the presence of mercuric acetate as a scavenger for iodide ion. The reaction shows zero order in Maltose, first order each in $[IO_4^-]$ and $[Os(VIII)]$ and positive effect with respect to $[OH^-]$. A suitable mechanism in conformity with the kinetic observations has been proposed and the thermodynamic parameters computed.</p> <p>Keywords: kinetics, Os(VIII), catalysis, maltose, periodate.</p> <p>Introduction: Oxidant like N-bromoacetamide*, Potassium bromate³⁰ etc. have been earlier used in oxidation of various compounds in presence of catalyst. The Os(VIII) homogeneous catalysis of periodate oxidation of Maltose in sodium hydroxide has been studied. A little work has been reported on Os(VIII) catalyzed oxidation of sodium periodate in alkaline medium¹¹. This prompted us to undertake the present investigation on Os(VIII) catalyzed oxidation of Maltose by periodate in alkaline medium.</p> <p>Experimental: Materials: solutions of Maltose (E. Merck), sodium periodate (S.d. fine Chemicals AR) $NaClO_4$ and $Hg(OAc)_2$ (E. Merck), were prepared by dissolving the weighed amount of samples in triple distilled water. $NaOH$ (S.d. fine) was used as a source of OH^- ions. Osmium tetroxide, OsO_4 (Johnson Matthey) and all other chemicals of reagent grade were used. OsO_4 solution was prepared by dissolving it in 0.5 mol dm⁻³ $NaOH$ solution. It was analyzed iodometrically and stored in a refrigerator.</p> <p>Kinetics: Requisite volumes of all reagents, including substrate, were taken in a reaction vessel and thermostated at 35^o C for thermal equilibrium. A measured volume of sodium periodate solution, also maintain separately at the same temperature, was rapidly poured into the reaction vessel. Progress of the reaction was followed by assaying aliquots of the reaction mixture for unconsumed periodate, iodometrically using starch as an indicator, after suitable time intervals.</p> <p>Result and Discussion: The stoichiometric analysis of the oxidation of Maltose with sodium periodate indicates that one mole of oxidant reacts with one mole of substrate. The product analysis by conventional method shows the formation of an acid after the reaction. Thus, over all reaction may be represented as:-</p> <div style="text-align: center;">  </div> <p style="text-align: right;">46</p>
	Title of the Paper/Vol./No./ Page	Osmium(VIII) catalysis in oxidation of maltose by sodium periodate in aqueous alkaline medium : A kinetic study, 8, 46-51	
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	Name of the Journal	Bull. Catal. Soc. India	
	Year of Publication	2009	
	ISSN	1566-7367	
	Link of the recognition in UGC enlistment of the Journal		
176	Name of the Author	Sheila Srivastava	<p style="text-align: center;">International Journal of Pure & Applied Chemistry 4(3), (July-September 2009) pp. 209-215</p> <p style="text-align: center;">Kinetics and Mechanism of the Acidic Quinolinium Fluorochromate Oxidation of some Unsaturated Acids in Acetone Catalyzed by Aquachlororuthenium(III) complex</p> <p style="text-align: center;">Sheila Srivastava* and Parul Srivastava Chemical Laboratories, Ferroz Gandhi College, Raebareilly-229901, U.P., India</p> <p>ABSTRACT: Kinetic investigation in Ru(III) catalyzed oxidation of fumaric acid (FA) and crotonic acid (CA) in an acidified solution of quinolinium fluorochromate (QFC) has been studied in the temperature range of 30^o-45^o C. First order kinetics was observed in case of catalyst Ru(III) as well as oxidant QFC. The order of reaction w.r.t. substrate (unsaturated acids) was found to be zero. Increase in [Cl⁻] showed fractional positive order. The influence of [H⁺] and ionic strength on the rate was found to be insignificant. The main product of oxidation of fumaric acid (FA) and crotonic acid (CA) were identified as pyruvic acid and acetone respectively. The reaction has been studied in ten different solvents. The first order rate constant had no effect with decrease in the dielectric constant of the medium. The values of rate constants observed at four different temperatures (30, 35, 40 and 45^o C) were utilized to calculate the activation parameters. A suitable mechanism in conformity with the kinetic observations has been proposed and the rate law has been derived on the basis of obtained data. A transient complex formed between Ru^{III} and oxidant in a slow and rate determining step. Further reacts with substrate to give the products in a series of fast steps.</p> <p>Keywords: Kinetics, oxidation, quinolinium fluorochromate, Ru(III) chloride, unsaturated acids.</p> <p>Introduction: Halochromates have been used as mild and selective oxidizing reagent in synthetic organic chemistry [1]. Quinolinium fluorochromate [2] (QFC) is also one such compound. The kinetics of redox reactions involving homogeneous catalyst such as platinum group metals particularly Osmium(VIII), Iridium(III) and Palladium(II) have been extensively investigated from mechanistic point of view. The use of Ru(III) chloride as a non-toxic and homogeneous catalyst has been reported by several workers [3-6]. The mechanism of reaction depends upon the nature of the oxidant, nature of the substrate and the ways in which transition metal complex ions play their role in order to promote the reagent molecules to the activated state before changing into final products under experimental conditions. The kinetic and mechanistic aspects of the oxidation by halochromates, a chromium(VI) species like Quinolinium bromochromate (QBC), Quinolinium chlorochromate (QCC) and few reports on the mechanistic aspects of oxidation reactions of QFC are available in literature [7-10]. Nearly no explanation was forthcoming in trying to rationalize the difference in kinetic behaviour. It was thought worthwhile to study the kinetics and mechanism of Ru(III) catalyzed oxidation of unsaturated acid by QFC in acetone as a solvent, with a view to examine the kinetic features of the reaction and establish the mechanistic pathways for the oxidation processes in the presence of different solvents with aims to (i) ascertain real reactive species of catalyst and oxidant (ii) identify the oxidant products, (iii) elucidate a plausible reaction mechanism, and (iv) deduce rate law consistent with kinetic results and calculated activation parameters.</p> <p>Experimental: Material: The unsaturated acids were commercial products and were used as obtained. QFC was prepared by the reported method [2] and its purity was ascertained by an iodometric</p>
	Title of the Paper/Vol./No./ Page	Kinetics and mechanism of acidic quinolinium fluorochromate oxidation of some unsaturated acids in acetone by Aquachlororuthenium (III) complex, 4(2),209-215	
	Department of the Teacher	Chemistry	
	Name of the Journal	IJPAC	
	Year of Publication	2009	
	ISSN	0973-3876	
	Link of the recognition in UGC enlistment of the Journal		

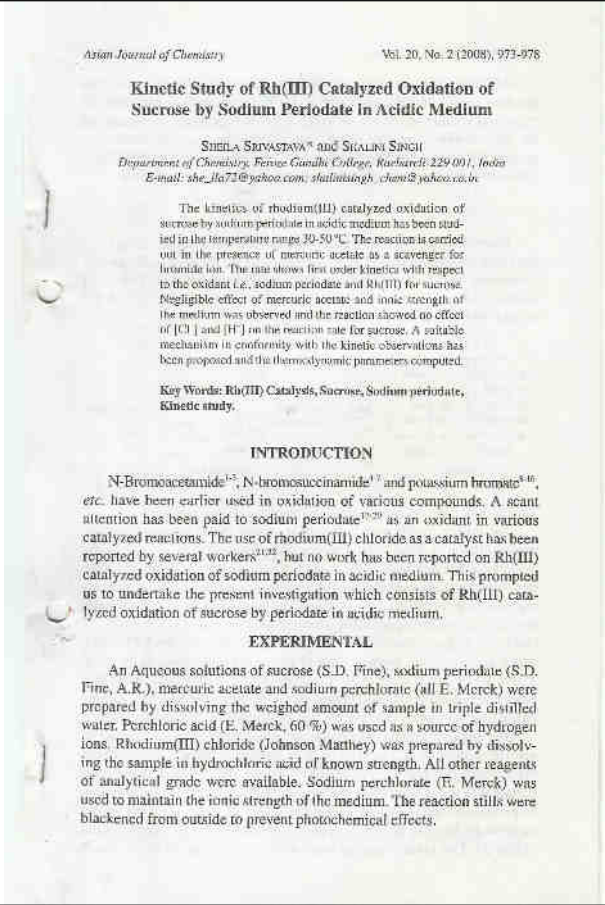
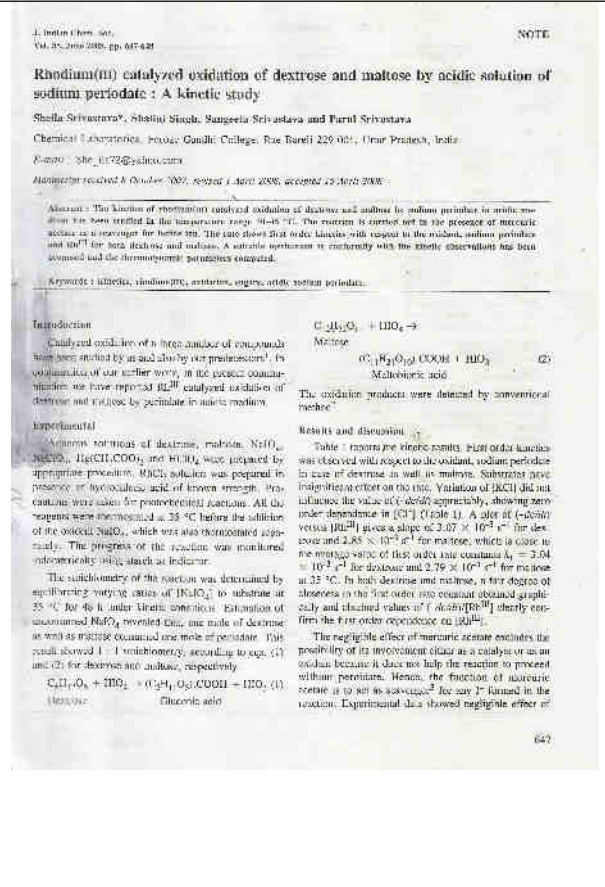
177	Name of the Author	Sheila Srivastava	<p style="text-align: center;"><i>International Journal of Pure & Applied Chemistry</i> 36(3) (October-December, 2009) pp. 261-264</p> <p style="text-align: center;">Osmium(VIII) Catalyzed Oxidation of Some Sugars in Presence of Alkaline Potassium Bromate</p> <p style="text-align: center;">Sheila Srivastava, Shalini Singh, Purni Srivastava and Anil Jainwal <i>Physics-Science Lab, Feroze Gandhi College, Rao Bahadri - 220001, G. P., India</i></p> <p>ABSTRACT: Osmium(VIII) catalyzed oxidation of some sugars (D-glucose & D-galactose) by potassium bromate in alkaline medium is found to occur via indirect catalytic complex formation in a slow step followed by the attack of substrate and examples, in the fast step to yield the products with regeneration of catalyst. The reaction is carried out in the presence of mercuroacetate as scavenger for bromide ion. The reaction shows zero order in substrate (D-glucose & D-galactose), first order in $[OBr_2]$ and second order with respect to $[OH^-]$. Negligible effect of change in $[H_2O_2]$, ionic strength of the solution, Ca^{2+} has been observed. $[OBr_2]$, $[H_2O_2]$, $[OH^-]$ and the reactive species of O_3^{2-} in alkaline solution potassium bromate, respectively. O_3^{2-}, acetic acid and galactose can act as scavenger for bromide ion. Various activation parameters have been calculated and reaction. A suitable mechanism in accordance with the kinetic observations has been proposed and the thermodynamic parameters calculated.</p> <p>Keywords: Osmium(VIII), catalysis, D-glucose, D-galactose, $EBBr_2$.</p> <p>Introduction Oxidation of sodium periodate¹, N-bromosuccinimide^{2,3}, N-bromosuccinimide^{4,5,6}, have been earlier used in oxidation of various compounds in presence of catalyst. The use of O_3^{2-} as a catalyst has been reported by several workers^{7,8}. Scant attention has been paid to potassium bromate⁹ as an oxidant in O_3^{2-} catalyzed reaction in alkaline medium. The present paper deals with kinetics and mechanism of O_3^{2-} catalyzed oxidation of some sugars by potassium bromate in alkaline medium, in presence of mercuroacetate as a scavenger.</p> <p>Experimental Materials: Sodium periodate, Potassium bromate, Sodium hydroxide, D-glucose, D-galactose, Mercuroacetate (M.Sc.), were used as supplied without further purification by preparing their solutions in doubly distilled water. A stock solution of O_3^{2-} (0.05M) solution was prepared by dissolving the amount calculated amount of K_2O_2 (0.0494 g) in 100 ml. solutions were used of analytical grade. The reaction vessels were cleaned with black paper to avoid any photochemical reaction.</p> <p>Methodology: The stoichiometry of the reaction was also studied by equalizing varying concentrations of $EBBr_2$ (used) at 35°C for 48 h in kinetic conditions. The amount of unreacted bromate showed for the oxidation of sugars is indicated by colorimetric method. The results showed 1:1 stoichiometry according to equation (A) and (B) for glucose and galactose, respectively.</p> <p style="text-align: center;">  </p> <p style="text-align: center;"> <small>Dr. Anil Jainwal, Department of Chemistry, Feroze Gandhi College, Rao Bahadri, G. P., India. E-mail: aniljainwal@gmail.com</small> </p>
Title of the Paper/Vol./No./ Page	Osmium(VIII) catalyzed oxidation of some sugars in presence of alkaline potassium bromate, 4(3), 261-264,		
Department of the Teacher	Chemistry		
Name of the Journal	IJPAC		
Year of Publication	2009		
ISSN	0973-3876		
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178	Name of the Author	Sheila Srivastava	<p style="text-align: center;"><i>Acta Ciencia Indica</i>, Vol. XXXV, No. 3, 303 (2009)</p> <p style="text-align: center;">A KINETIC STUDY OF Ru (III) CATALYZED OXIDATION OF GLYCINE BY N-BROMOACETAMIDE IN ALKALINE MEDIUM</p> <p style="text-align: center;">SHEILA SRIVASTAVA, SHALINI SINGH AND HARIOM TRIPATHI <i>Chemical Laboratories, Feroze Gandhi College, Rao Bahadri - 220001 (G.P.), India</i></p> <p style="text-align: right;">RECEIVED : 24 January, 2008</p> <p>Kinetic investigation in ruthenium(III) catalyzed oxidation of glycine in an alkaline solution of NBA has been carried out in the temperature range of 30-45°C. The reaction exhibits first order kinetics in case of oxidant NBA, catalyst ruthenium(III)-chloride. The reaction follows zero order kinetics in glycine. Increase in $[Cl^-]$ showed a negative effect, while $[OH^-]$ showed positive effect. Successive addition of mercuroacetate exhibited negative effect on the reaction rate. An intermediate complex is formed between the reactive species of NBA and the catalyst ruthenium(III) chloride in the slow and rate determining step. Negligible effect of mercuroacetate depicts its role as a scavenger for any bromide ion formed in the reaction and thus eliminates the possibility of its involvement either as a catalyst or parallel-oxidation by free-bromine. Negligible effect of ionic strength has been observed. OBr^- and $[RuCl_2(H_2O)]^{2+}$ have been proposed as the real reactive species of NBA and ruthenium(III) chloride respectively. Various activation parameters have been computed. A suitable mechanism in agreement with the kinetic observations has been proposed.</p> <p>KEYWORDS : Ruthenium(III) catalysis, Glycine, NBA, kinetic study.</p> <p>INTRODUCTION Oxidants like potassium bromate [1-4], N-bromosuccinimide [5-8], sodium-periodate [9-12] etc. have been earlier used in oxidation of various compounds in presence of catalyst. Work has been done on kinetics and mechanism of uncatalyzed oxidation of ketones [12-14] and primary alcohols [15] by NBA. The utility of ruthenium(III) chloride as a non-toxic and homogeneous catalyst has been reported by several workers [16-18]. Recently NBA has been used as oxidant for some reducing sugars [19] in catalyzed reaction. Scant attention has been paid to explore the catalytic role of ruthenium(III) chloride with NBA as oxidant [20-23], and nearly no work is done in alkaline medium. This prompted us to undertake the present work which is the mechanistic study of Ru(III) catalyzed oxidation of glycine by NBA in alkaline medium in presence of mercuroacetate as scavenger. Mechanistic steps are discussed.</p>
Title of the Paper/Vol./No./ Page	A Kinetic study of Ru(III) catalyzed oxidation of glycine by N-bromoacetamide in alkaline medium, 35C(3), 303-309		
Department of the Teacher	Chemistry		
Name of the Journal	Acta Ciencia Indica		
Year of Publication	2009		
ISSN	0253-733X		
Link of the recognition in UGC enlistment of the Journal			

179	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	A Ir(III) catalysis in oxidation of oxalic acid and malic acid by QFC in acidic medium, 4(2), 77-81
	Department of the Teacher	Chemistry
	Name of the Journal	Physical Chemistry : an Indian Journal
	Year of Publication	2009
	ISSN	0974-7524
	Link of the recognition in UGC enlistment of the Journal	
180	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	A kinetic study of Ru(III) catalyzed oxidation of sugars by Potassium Bromate in alkaline medium between pH range 10-12, 7, 20-27,
	Department of the Teacher	Chemistry
	Name of the Journal	Bull. Catal. Soc. India
	Year of Publication	2009
	ISSN	1566-7367
	Link of the recognition in UGC enlistment of the Journal	



181	Name of the Author	Sheila Srivastava	<p>Pd(II) catalysis... by S. Sheila et al., Bulletin of the Catalysis Society of India, 7 (2008) 12-19</p> <p>Pd(II) catalysis in oxidation of D-Fructose by chloramine-T' in acidic medium: A kinetic study Sheila Srivastava*, Pushpanjali Singh. Chemical Laboratories, Herozo Gandhi College, Raebareilly-229001., (U.P) India. E-mail: sheila72@yahoo.com</p> <p>Abstract - Kinetic investigations on Pd(II) catalyzed oxidation of D-Fructose by acidic solution of chloramine-T in the presence of mercuric acetate, as a scavenger have been made in the temperature range of 30-45°C. The rate shows first order kinetics in case of chloramine-T and order of reaction is zero and one with respect to substrate and Pd(II) respectively. Increase in [Cl⁻] showed positive effect, while [H⁺] showed zero effect. Negligible effect of mercuric acetate and ionic strength of the medium was observed. A transient complex, formed between PdCl₂ and chloramine-T, PdCl₂ being the reactive species of Palladium(II) chloride, disproportionates in a slow and rate determining step. Various activation parameters have been calculated. A suitable mechanism in agreement with observed kinetics has been proposed.</p> <p>Key Words- Pd(II) chloride, Chloramine-T, D-Fructose.</p> <p>Introduction Kinetics and Mechanism of palladium(II) catalyzed oxidation of some compounds by chloramine-T in perchloric acid medium has been reported^{1,2}. Chloramine-T has been used as an oxidant in oxidation of some compounds such as amino alcohols³ and α-amino acids⁴ etc. The catalytic as well as inhibition action of Pd(II) in various redox reactions has been reported over the past decade, there has been a considerable interest in the speciation of aqueous PdCl₂ solutions and complexes^{5,6} of Pd(II) with Cl⁻ ions. The use of palladium(II) chloride as a non-toxic and homogeneous catalyst has been reported by several workers⁷⁻¹¹. Scant work has been done for Pd(II) catalyzed oxidation by Chloramine-T which prompted us to undertake the kinetic study of Pd(II) catalyzed</p> <p>oxidation of D-Fructose by Chloramine-T in acidic medium.</p> <p>Experimental Aqueous solution of D-fructose (E. Merck), Chloramine-T (CDH grade), and mercuric acetate (E. Merck) were prepared by dissolving the weighed amount of sample in triple distilled water. Perchloric acid (60%) of E. Merck grade was used as a source of hydrogen ions. Palladium(II) chloride (Johnson Matthey) was prepared by dissolving the sample in hydrochloric acid of known strength. All other reagents of analytical grade were available. Sodium perchlorate(E. Merck) was used to maintain the ionic strength of the medium. The reaction flasks were blackened from outside to prevent photochemical effects.</p> <p>Kinetics A thermostated water bath was used to maintain the desired temperature within $\pm 0.1^\circ\text{C}$. Requisite volume of all reagents</p> <p>12</p>
	Title of the Paper/Vol./No./ Page	Pd(II) catalysis in oxid. of D-Fructose by Chloramine-T in acidic medium : A kinetic study 7, 12-19	
	Department of the Teacher	Chemistry	
	Name of the Journal	Bull. Catal. Soc. India	
	Year of Publication	2008	
	ISSN	1566-7367	
	Link of the recognition in UGC enlistment of the Journal		
182	Name of the Author	Sheila Srivastava	<p>Kinetics of Ru(III) ... by S. Sheila et al., Bulletin of the Catalysis Society of India, 7 (2008) 1-11</p> <p>KINETICS OF RUTHENIUM(III) CATALYZED OXIDATION OF SOME AMINO ACIDS BY N-BROMOSUCCINIMIDE IN ACIDIC MEDIUM. Sheila Srivastava* Durga Khare, Shekhar Singh and Parul Srivastava. Chemical Laboratories, Herozo Gandhi College Raebareilly-229001., (U.P), India. e-mail: sheila72@yahoo.com / shaili@rediffmail.com / parul@rediffmail.com</p> <p>Abstract The kinetics and mechanism of Ru(III) catalyzed oxidation of asparagine and aspartic acid by N-bromosuccinimide (NBS) have been investigated in acidic medium in the presence of mercuric acetate as a scavenger in the temperature range 30°C - 45°C. The reactions follow identical kinetics. The observed rate of oxidation is first order in [NBS], [Substrate] and [Ru(III)] respectively. A small increase in rate is observed with increase in [HCl]. Addition of succinimide and acetic acid have retarding effect on the rate of oxidation. Negligible effect of [H₂OAc₂], ionic strength and [H⁺] have been observed. Various activation parameters have been calculated. The mechanism of the reaction is discussed in terms of kinetic results.</p> <p>Key Words: Kinetics, Ru(III), oxidation, Amino acids, acidic N-bromosuccinimide * Author for correspondence.</p> <p>Introduction Oxidative decarboxylation of amino acids is one of the well documented biochemical processes. Many reports are available in the recent literature on the kinetics of oxidation of amino acids by a variety of oxidants.¹⁻¹⁰ However exact mechanism of the chemical process is not well understood. Therefore, three reactions are used for further experimentation. NBS is a mild and selective oxidant for many organic compounds.¹¹⁻¹⁸ The ability of Ruthenium(III) chloride as a new toxic and homogeneous catalyst has been reported earlier in our laboratory.¹⁹⁻²³ So far, little attention has been paid to the activity of NBS in the oxidation of amino acids in acidic media. Here we report the results of kinetic and mechanistic studies of the oxidation of some amino acids in the presence of Ru(III) as a catalyst by NBS in acidic medium.</p> <p>Experiment An aqueous solution of NBS was prepared afresh each day from G.R. (Merck) sample of the reagent, and its strength was checked volumetrically.²⁴ Aqueous solution of amino acids (E. Merck), sodium perchlorate, succinimide and mercuric acetate (all E. Merck) were prepared by dissolving the weighed amount of sample in triple distilled water. Perchloric acid (60%) of E. Merck grade was used as a source of hydrogen ions. Ruthenium(III) chloride (Johnson Matthey) was prepared by dissolving the sample in HCl of known strength. The reaction flasks were blackened from outside to avoid any possible photochemical decomposition.</p> <p>Kinetics A thermostated water bath was used to maintain the desired temperature within $\pm 0.1^\circ\text{C}$. Appropriate amount of substrate and all other reagents, except the NBS, and enough distilled water to keep the total volume constant were taken in a reaction vessel and thermostated at 25°C for thermal equilibrium. A measured amount of NBS solution pre-equilibrated at same temperature was rapidly added to</p>
	Title of the Paper/Vol./No./ Page	Kinetics of Ruthenium(III) catalyzed oxidation of some amino acids by N-bromosuccinimide in acidic medium, 7, 1-11,	
	Department of the Teacher	Chemistry	
	Name of the Journal	Bull. Catal. Soc. India	
	Year of Publication	2008	
	ISSN	1566-7367	
	Link of the recognition in UGC enlistment of the Journal		

183	Name of the Author	Sheila Srivastava	<p style="text-align: center;"><i>Asian Journal of Chemistry</i> Vol. 20, No. 5 (2008), 4773-4780</p> <p style="text-align: center;">Rh(III) Catalyzed Oxidation of Cyclic Alcohols by Sodium Periodate in Acidic Medium</p> <p style="text-align: center;">SHEILA SRIVASTAVA*, NARGHETA SRIVASTAVA, PARUL and SHALINI SINGH Chemical Laboratory, Feroze Gandhi College, Raebareilly-229 001, India E-mail: she_slv72@yahoo.com</p> <p>Kinetic investigation on Rh(III) catalyzed oxidation of cyclopentanol and cyclohexanol by acidic solution of sodium periodate (NaIO₄) in the presence of mercury(II) acetate as a scavenger has been carried out in the temperature range of 19-45 °C. The reaction exhibits first order kinetics with respect to substrate and catalyst, whereas zero order with respect to oxidant i.e. NaIO₄. The rate shows an effect with increasing concentration of [H⁺]. The influence of [Hg(OAc)₂], ionic strength and [Cl⁻] on the rate was found to be insignificant. The effect of varying percentage of AcOH on reaction rate was also examined. Various activation parameters have been calculated from rate measurements and the rate law derived on the basis of obtained data.</p> <p>Key Words: Kinetics, Rh(III), Oxidation, Cyclic alcohols, Acidic sodium periodate.</p> <p style="text-align: center;">INTRODUCTION</p> <p>[KBrO₃]^{1,2} and [NaIO₄]³ have been used as oxidants for various compounds in acidic medium. N-bromosuccinimide^{4,5}, N-bromosuccinimide^{6,7} have been earlier used in oxidation of various compounds in the presence of catalyst. A little attention has been paid to sodium periodate^{8,9} as an oxidant in various catalyzed reactions. The use of Rh(III) as a catalyst has been reported by several workers. Kinetics and mechanism of Rh(III) catalyzed oxidation of 1,2-glycols¹⁰ and polyhydric alcohols by acidic KBrO₃¹¹ are also reported. No work has been reported in literature on Rh(III) catalyzed oxidation of cyclic alcohols in acidic medium. This prompted us to undertake the present investigation on Rh(III) catalyzed oxidation of cyclopentanol and cyclohexanol by periodate in acidic medium.</p> <p style="text-align: center;">EXPERIMENTAL</p> <p>An aqueous solution of cyclopentanol and cyclohexanol (E. Merck), sodium periodate (SD Fine Chemicals AR) NaClO₄ and Hg(OAc)₂ (E. Merck), were prepared by dissolving the weighed amount of samples in triple distilled water. Perchloric acid (60 %) of E. Merck grade was used as a source of</p>
	Title of the Paper/Vol./No./ Page	Rh(III) catalyzed oxidation of Cyclic Alcohols by Sodium Periodate in Acidic medium, 20 (6), 4773-4780,	
	Department of the Teacher	Chemistry	
	Name of the Journal	Asian Journal of Chemistry	
	Year of Publication	2008	
	ISSN	0970-7077	
	Link of the recognition in UGC enlistment of the Journal		
184	Name of the Author	Sheila Srivastava	<p style="text-align: center;"><i>Asian Journal of Chemistry</i> Vol. 20, No. 1 (2008), 317-323</p> <p style="text-align: center;">Ruthenium(VIII) Catalyzed Oxidation of Some Cyclic Alcohols by Sodium Periodate in Alkaline Medium</p> <p style="text-align: center;">SHEILA SRIVASTAVA*, SARIKA SINGH and PARUL SRIVASTAVA Department of Chemistry, Feroze Gandhi College, Rae-Bareilly-229 001, India E-mail: she_slv72@yahoo.com</p> <p>Kinetic investigations on ruthenium(VIII) catalyzed oxidation of cyclic alcohols (viz. cyclopentanol, cyclohexanol and cycloheptanol) by alkaline solution of sodium periodate in the presence of mercury(II) acetate as a scavenger have been made in the temperature range of 30-45°C. The rate of oxidation shows first order kinetics with respect to sodium periodate and Ru(VIII) while order of the reaction is zero with respect to substrate and positive with respect to hydroxyl ions. Insignificant influence of mercury(II) acetate and ionic strength of the medium was observed. A suitable mechanism in conformity with the kinetic observations has been proposed and the thermodynamic parameters computed.</p> <p>Key Words: Kinetics, Ruthenium(VIII), Oxidation, Cyclic alcohols, Sodium periodate.</p> <p style="text-align: center;">INTRODUCTION</p> <p>Sodium periodate has been earlier used as an oxidant in oxidation of some compounds^{1,2}. Less attention has been paid to the activity of sodium periodate in the presence of catalyst in acidic^{3,4} as well as in alkaline media⁵, but the results have not been interpreted so as to reveal a clear picture of the mode of catalyzed process. The utility of ruthenium(VIII) oxide as a non-toxic and homogeneous catalyst has been reported by several workers⁶⁻¹¹. This prompted us to undertake the present investigation, which consists of Ru(VIII) catalyzed oxidation of some cyclic alcohols by alkaline iodate in presence of mercury(II) acetate as a scavenger.</p> <p style="text-align: center;">EXPERIMENTAL</p> <p>Aqueous solution of cyclic alcohols, sodium periodate (BDH, AR), sodium perchlorate and mercury(II) acetate (E. Merck) were prepared by dissolving the weighed amount of samples in triple distilled water. Sodium hydroxide was prepared by dissolving weighed amount of sample in triple distilled water and its solution was used as a source of hydroxyl ions. Ruthenium(VIII) oxide (Johnson Matthey) solution was prepared by</p>
	Title of the Paper/Vol./No./ Page	Ru(VIII) catalyzed oxidation of some cyclic alcohols by sodium periodate in alkaline medium, 20, No. 1, 317-323,	
	Department of the Teacher	Chemistry	
	Name of the Journal	Asian Journal of Chemistry	
	Year of Publication	2008	
	ISSN	0970-7077	
	Link of the recognition in UGC enlistment of the Journal		

185	Name of the Author	Sheila Srivastava	 <p>Asian Journal of Chemistry Vol. 20, No. 2 (2008), 973-978</p> <p>Kinetic Study of Rh(III) Catalyzed Oxidation of Sucrose by Sodium Periodate in Acidic Medium</p> <p>SHEILA SRIVASTAVA* and SHALINI SINGH Department of Chemistry, Feroze Gandhi College, Raibareilly-229 001, India E-mail: she_she73@yahoo.com; shalinisingh_chand@yahoo.co.in</p> <p>The kinetics of rhodium(III) catalyzed oxidation of sucrose by sodium periodate in acidic medium has been studied in the temperature range 30-50 °C. The reaction is carried out in the presence of mercuric acetate as a scavenger for bromide ion. The rate shows first order kinetics with respect to the oxidant (i.e. sodium periodate) and Rh(III) for sucrose. Negligible effect of mercuric acetate and ionic strength of the medium was observed and the reaction showed no effect of [Cl⁻] and [H⁺] on the reaction rate for sucrose. A suitable mechanism in conformity with the kinetic observations has been proposed and the thermodynamic parameters computed.</p> <p>Key Words: Rh(III) Catalysis, Sucrose, Sodium periodate, Kinetic study.</p> <p>INTRODUCTION</p> <p>N-Bromoacetamide^{1,2}, N-bromosuccinimide^{3,4} and potassium bromate⁵⁻¹⁰, etc. have been earlier used in oxidation of various compounds. A scant attention has been paid to sodium periodate^{11,12} as an oxidant in various catalyzed reactions. The use of rhodium(III) chloride as a catalyst has been reported by several workers^{13,14}, but no work has been reported on Rh(III) catalyzed oxidation of sodium periodate in acidic medium. This prompted us to undertake the present investigation which consists of Rh(III) catalyzed oxidation of sucrose by periodate in acidic medium.</p> <p>EXPERIMENTAL</p> <p>An Aqueous solutions of sucrose (S.D. Fine), sodium periodate (S.D. Fine, A.R.), mercuric acetate and sodium perchlorate (all E. Merck) were prepared by dissolving the weighed amount of sample in triple distilled water. Perchloric acid (E. Merck, 60 %) was used as a source of hydrogen ions. Rhodium(III) chloride (Johnson Matthey) was prepared by dissolving the sample in hydrochloric acid of known strength. All other reagents of analytical grade were available. Sodium perchlorate (E. Merck) was used to maintain the ionic strength of the medium. The reaction flasks were blackened from outside to prevent photochemical effects.</p>
	Title of the Paper/Vol./No./ Page	Kinetic study of Rh(III) catalyzed oxidation of sucrose by sodium periodate in acidic medium, 20, No. 2, 973-978	
	Department of the Teacher	Chemistry	
	Name of the Journal	Asian Journal of Chemistry	
	Year of Publication	2008	
	ISSN	0970-7077	
186	Name of the Author	Sheila Srivastava	 <p>J. Indian Chem. Soc. Vol. 85, 2008, pp. 647-649</p> <p>Rhodium(III) catalyzed oxidation of dextrose and maltose by acidic solution of sodium periodate : A kinetic study</p> <p>Sheila Srivastava*, Sheela Singh, Sangeeta Srivastava and Parul Srivastava Chemical Laboratories, Feroze Gandhi College, Raibareilly-229 001, Uttar Pradesh, India E-mail: she_she73@yahoo.com</p> <p>Manuscript received 8 October 2007; revised 1 April 2008; accepted 23 April 2008</p> <p>Abstract: The kinetic of rhodium(III) catalyzed oxidation of dextrose and maltose by sodium periodate in acidic medium has been studied in the temperature range 30-50 °C. The reaction is carried out in the presence of mercuric acetate as a scavenger for bromide ion. The rate shows first order kinetics with respect to the oxidant, sodium periodate and Rh(III) for both dextrose and maltose. A suitable mechanism in conformity with the kinetic observations has been proposed and the thermodynamic parameters computed.</p> <p>Keywords: dextrose, maltose, Rh(III), mercuric acetate, acidic sodium periodate.</p> <p>Introduction</p> <p>Catalyzed oxidation of a large number of compounds have been studied by us and also by our predecessors¹, in continuation of our earlier work² in the present communication we have reported Rh(III) catalyzed oxidation of dextrose and maltose by periodate in acidic medium.</p> <p>Experimental</p> <p>Aqueous solutions of dextrose, maltose, NaIO₄, NaClO₄, Hg(CH₃COO)₂ and HClO₄ were prepared by appropriate procedure. HClO₄ solution was prepared in presence of hydrochloric acid of known strength. Precipitates were taken for photometric analysis. All the solutions were thermostated at 35 °C before the addition of the oxidant NaIO₄, which was also thermostated accordingly. The progress of the reaction was monitored spectrophotometrically at 540 nm as indicator.</p> <p>The stoichiometry of the reaction was determined by spectrophotometric titration of NaIO₄ to substrate at 25 °C. For 40 μl under kinetic conditions. Estimation of unreacted NaIO₄ prevented due, one mole of dextrose or maltose consumed one mole of periodate. The results showed 1 : 1 stoichiometry, according to eqs. (1) and (2) for dextrose and maltose, respectively.</p> $C_6H_{12}O_6 + IO_4^- \rightarrow C_6H_{12}O_5 + IO_3^- + 2H^+ \quad (1)$ $C_6H_{12}O_{10} + IO_4^- \rightarrow C_6H_{12}O_9 + IO_3^- + 2H^+ \quad (2)$ <p>Glucose acid Glucuronic acid</p> <p>Results and discussion</p> <p>Table 1 contains five kinetic results. First order kinetics was observed with respect to the oxidant, sodium periodate in case of dextrose as well as maltose. Substrate zero order dependence on the rate. Variation of [Rh(III)] did not influence the rate of reaction appreciably, showing zero order dependence in [Rh(III)] (Table 1). A plot of (-dln[IO₄]/dt) versus [IO₄]⁰ gives a slope of 3.07 × 10⁻³ s⁻¹ for dextrose and 2.85 × 10⁻³ s⁻¹ for maltose, which is close to the average slope of first order rate constant k₁ = 2.94 × 10⁻³ s⁻¹ for dextrose and 2.79 × 10⁻³ s⁻¹ for maltose at 35 °C. In both dextrose and maltose, a first degree of decrease in the first order rate constant obtained graphically and obtained values of (-dln[IO₄]/dt) thereby confirms the first order dependence on [IO₄]⁰.</p> <p>The negligible effect of mercuric acetate enhances the possibility of its involvement either as a catalyst or as an oxidant because it does not help the reaction to proceed without periodate. Hence, the function of mercuric acetate is to act as a scavenger for any Br⁻ formed in the reaction. Experimental data showed negligible effect of</p> <p>NOTE</p>
	Title of the Paper/Vol./No./ Page	Rh(III) Catalyzed oxidation of dextrose and maltose by acidic solution of sodium periodate, 85, 647-649	
	Department of the Teacher	Chemistry	
	Name of the Journal	J. Indian Chem. Soc	
	Year of Publication	2008	
	ISSN	0019-4522	
	Link of the recognition in UGC enlistment of the Journal		

187	Name of the Author	Sheila Srivastava	<p style="text-align: right;"><i>Oxidation Communications</i> 31, No. 2, 327-334 (2008)</p> <p>Ru(III) AND Ir(III) CATALYZED OXIDATION OF CITRIC ACID BY N-BROMOSUCCINIMIDE. A COMPARATIVE KINETIC STUDY</p> <p>SHE SRIVASTAVA*, P. KHARE, S. SINGH, S. SRIVASTAVA</p> <p><i>Chemical Laboratories, Ferns Gandhi College, 229 001 Rae Bareilly, U.P., India</i> E-mail: sheila72@yahoo.com</p> <p>ABSTRACT</p> <p>The kinetics and mechanism of Ru(III) and Ir(III) catalysed oxidation of citric acid by N-bromosuccinimide (NBS) have been studied in acidic medium in the presence of mercuric acetate as a scavenger in the temperature range of 30-45°C. Ru(III) and Ir(III) catalysed reactions follow identical kinetics. The rate showed zero order kinetics in [substrate] and first order with respect to oxidant [NBS], [Ru(III)] and [Ir(III)], respectively. Increase in [Cl⁻] showed positive effect, while negative effect of acetic acid was observed. A suitable mechanism in conformity with the observed kinetics was proposed and activation parameters were calculated.</p> <p>Keywords: oxidation, citric acid, N-bromosuccinimide, Ru(III), Ir(III), catalysts</p> <p>AIMS AND BACKGROUND</p> <p>The kinetic investigation of oxidation of some aliphatic and aromatic hydroxy acids with various oxidising agents have been reported by various workers¹⁻⁴. N-bromosuccinimide (NBS) is a mild and selective oxidant for many organic compounds⁵⁻⁶. The utility of ruthenium(III) chloride⁷⁻¹¹ and iridium(III) chloride^{12,13} as homogeneous catalyst has been reported by several workers. So far, little attention has been paid to the activity of NBS in the presence of catalyst in acidic media. This prompted us to undertake the present work which constitutes the comparative kinetic study of Ru(III) and Ir(III) catalysed oxidation of citric acid by NBS. Mechanistic steps are discussed.</p> <p>EXPERIMENTAL</p> <p>All the chemicals used were of highest purity available. Aqueous solution of citric acid (F. Merck) was prepared by dissolving an accurately weighted amount of sample in triply distilled water. An aqueous solution of NBS was prepared fresh each day.</p> <p>* For correspondence.</p> <p style="text-align: right;">327</p>
	Title of the Paper/Vol./No./ Page	Ru(III) and Ir(III) Catalyzed Oxidation of Citric Acid by N-bromosuccinimide – A comparative kinetic study, 31 (2), 327-334	
	Department of the Teacher	Chemistry	
	Name of the Journal	Oxidation Communications	
	Year of Publication	2008	
	ISSN	0209-4541	
	Link of the recognition in UGC enlistment of the Journal		
188	Name of the Author	Sheila Srivastava	<p style="text-align: center;"><i>International Journal of Pure & Applied Chemistry</i> 30(1), January-March, 2008, pp. 17-20</p> <p>Kinetics and Mechanism of Rhodium(III) Catalyzed Oxidation of Polyhydric Alcohols by Acidified Sodium Periodate</p> <p>Sheila Srivastava*, Sangeeta Srivastava, Shalini Singh & Parul</p> <p><i>Chemical Laboratories, Ferns Gandhi College, Rae Bareilly-229001, U.P., India</i></p> <p>ABSTRACT: The kinetics of the Rh(III) catalyzed oxidation of mannitol and glycerol by an acidified solution of NaIO₄ in the presence of Hg(OAc)₂ as a scavenger, have been studied in the temperature range 30-45°C. The rate shows zero order with respect to the substrate and first order with respect to catalyst Rh(III). No salt effect and glycerol, methylglyoxal, ethyl glyoxal, and formaldehyde, are known to be oxidized by NaIO₄. The reaction shows a positive effect of [IO₄⁻], [Cl⁻], and [H⁺] on the reaction rate. A suitable mechanism in conformity with the kinetic observations has been proposed and activation parameters computed.</p> <p>Keywords: Kinetics, Rh(III), oxidation, polyhydric alcohols, acidic sodium periodate</p> <p>Introduction</p> <p>Potassium bromate (KBrO₃), K⁺ and NaIO₄⁻ have been used as oxidant for various compounds in acidic medium. N-bromosuccinimide^{1,2}, N-bromosuccinimide³ have been further used in oxidation of various 3D molecules in presence of catalyst. A kinetic reaction has been published on the catalyzed oxidation of mannitol in various metal salt reactions. The work on kinetics and mechanism of Rh(III) catalyzed oxidation of 1, 2, 3-glycols and polyhydric alcohols by acidic KBrO₃^{4,5} has also been reported. Recently no kinetic studies have been reported on the catalytic role of Rhodium(III) salt with NaIO₄ as an oxidant.</p> <p>This fact prompted the present investigation namely the oxidation of mannitol and glycerol by acidified NaIO₄ in the presence of Hg(II) chloride as a catalyst and Hg(OAc)₂ as a scavenger for any halide ion (Cl⁻).</p> <p>Experimental</p> <p>Materials: An aqueous solution of mannitol and glycerol (F. Merck), Sodium Periodate (S.D. Fine Chem. A.R.), HgCl₂ and Hg(OAc)₂, H₂O₂ (F. Merck) were prepared by dissolving the weighed amount of oxides in triply distilled water, perchloric acid (85%) of G. Merck grade</p> <p>was used as a source of hydrogen ions. A RhCl₃ (Sigma Chemical Company) solution was prepared in 10% of known strength (10/100). All other reagents were of analytical grade. Reaction vessels were gently blank to prevent photochemical decompositions.</p> <p>Kinetics: The reaction mixture of all reagents, including substrate, were thermostated at 35 ± 0.1°C to maintain equilibrium. A measured volume of RhCl₃ solution was added separately at the same temperature and rapidly poured into the reaction vessel. Progress of the reaction was followed by stopping aliquots of the reaction mixture in 2 ml of isobutanol by adding starch as an indicator after suitable time intervals.</p> <p>Stoichiometry and Product Analysis: The stoichiometry of the reaction was determined by equilibrating varying ratios of [NaIO₄] to mannitol and glycerol separately at 35°C for 48 hours under kinetic conditions. Estimation of unreacted NaIO₄ revealed that one mole of mannitol or one mole of glycerol consumes two moles of periodate according to equation (1):</p> $\text{RCH(OH)CH}_2\text{OH} + 2\text{NaIO}_4 \rightarrow \text{RCOOH} + 2\text{HIO}_3 + \text{H}_2\text{O} \quad (1)$ <p>where R = CH₂, CH(OH), CH₂CH(OH) for mannitol and 1,2,3-glycerol, respectively, whose oxidation products, mannitol and glyceric acid were detected by inclusion of the melting point of these solids. Glyceric acid was distilled⁶. Upon the reaction mixture 100-400 hours under kinetic</p>
	Title of the Paper/Vol./No./ Page	Kinetics and mechanism of Rh(III) catalyzed oxidation of Polyhydric alcohols by acidified sodium periodate, 3(1),17-20	
	Department of the Teacher	Chemistry	
	Name of the Journal	Oxidation Communications	
	Year of Publication	2008	
	ISSN	0973-3876	
	Link of the recognition in UGC enlistment of the Journal		

189	Name of the Author	Sheila Srivastava	
	Title of the Paper/Vol./No./ Page	Kinetics and mechanism of Rh(III) catalyzed oxidation of Ethylene Glycol by acidified sodium periodate,2(8),6228-6234	
	Department of the Teacher	Chemistry	
	Name of the Journal	Asian J. of Chemistry	
	Year of Publication	2008	
	ISSN	0970-7077	
	Link of the recognition in UGC enlistment of the Journal		
190	Name of the Author	Sheila Srivastava	
	Title of the Paper/Vol./No./ Page	Mechanistic study of Ruthenium(III) catalyzed oxidation of some polyhydric alcohols by bromate in acidic medium, 115-122	
	Department of the Teacher	Chemistry	
	Name of the Journal	Bull. Catal. Soc. India	
	Year of Publication	2008	
	ISSN	1566-7367	
	Link of the recognition in UGC enlistment of the Journal		

191	Name of the Author	Sheila Srivastava	<p style="text-align: center;">J. Saudi Chem. Soc., Vol. 12, No. 3, pp. 313-320 (2008) 317</p> <p style="text-align: center;">RHODIUM(III) CATALYZED OXIDATION OF SOME AMINO-ACIDS BY ACID POTASSIUM BROMATE: A KINETIC STUDY</p> <p style="text-align: center;">Sheila Srivastava*, Parul Srivastava, Ashish Kumar, Sangeta Srivastava and Shafiqi Singh Chemical Laboratories, Feroze Gandhi College, Raebareilly – 226001, U.P., India. (Received 9th Jan. 2008, Accepted 2nd July 2008)</p> <p>تتم دراسة حركية أكسدة الأحمين الحامضين والأمينات الأولية في محلول حمضي من بيروكسيدات البوتاسيوم في وجود حفاز روديوم(III) كبريتات. تم إجراء دراسات حركية في 30-40 °C، وأظهرت نتائج أن ترتيب التفاعل الكلي هو 1.5 في الأحمين الحامضين و 2.5 في الأمينات الأولية. تم إجراء دراسة حركية في الأحمين الحامضين والأمينات الأولية في وجود حفاز روديوم(III) كبريتات في وسط حمضي من بيروكسيدات البوتاسيوم. تم إجراء دراسات حركية في 30-40 °C، وأظهرت نتائج أن ترتيب التفاعل الكلي هو 1.5 في الأحمين الحامضين و 2.5 في الأمينات الأولية. تم إجراء دراسة حركية في الأحمين الحامضين والأمينات الأولية في وجود حفاز روديوم(III) كبريتات في وسط حمضي من بيروكسيدات البوتاسيوم. تم إجراء دراسات حركية في 30-40 °C، وأظهرت نتائج أن ترتيب التفاعل الكلي هو 1.5 في الأحمين الحامضين و 2.5 في الأمينات الأولية.</p> <p>Kinetic investigation of Rh(III) catalyzed oxidation of <i>α</i>-amino acids and Alanine in an acidified solution of potassium bromate in the presence of H₂O₂ as a scavenger, have been studied in the temperature range of 30-40 °C. Kinetics in concentration of oxidant and Rh(III) showed fractional positive order and fractional inverse order respectively. The influence of H₂O₂, pH, ionic strength and Cl⁻ ions, the rate was <i>W</i> = <i>k</i> [Ox]^{1.5} [Cat]^{2.5}. First order reaction was observed in case of acidified KBrO₃ and H₂O₂ as reactive species. The order of reaction with substrate is unity. The various electrodynamic parameters were also studied. Kinetic measurements at 20, 35, 40 and 45 °C respectively. A suitable mechanism in conformity with the kinetic observations has been proposed and the rate law is derived on the basis of oxidant decay. A transient complex formed between Rh(III) and sodium bromate in a slow and rate determining step, which further reacts with iron species in the presence of a scavenger for bromide ion.</p> <p>Key Words: Bromate, Catalysis, Oxidation, Rhodium(III), acids.</p> <p>INTRODUCTION Potassium bromate has been used to oxidize various compounds in both acidic and alkaline medium [1-5]. Little attention has been paid hitherto, as the reactivity of KBrO₃ in the presence of catalyst [7a] and nearly no investigation has so far been reported on the catalytic role of rhodium(III) chloride with potassium bromate as an oxidant in acidic medium. This fact prompted us to undertake the present investigation namely, "Acid bromate oxidation of amino acid by acidified KBrO₃ in the presence of Rh(III) chloride as a catalyst and Alanine in an acidified solution of potassium bromate as a scavenger, have been studied in the temperature range 30-40 °C. The rate shows zero order with respect to the substrate and 1st order with respect to catalyst Rh(III). Negligible effect of ionic strength Hg(OAc)₂ and ionic strength of the medium was observed and the reaction showed no effect of [H₂O₂], [Cl⁻] and [H⁺] ion concentrations on the reaction rate. A suitable mechanism in conformity with the kinetic observations has been proposed and the thermodynamic parameters computed.</p> <p>Keywords: Kinetics, Rh(III), oxidation, glycerol, acidic sodium periodate.</p> <p>EXPERIMENTAL Materials: An aqueous solution of <i>α</i>-amino acid Alanine (E. Merck), potassium bromate (Rohm and Haas), NaClO₄ and Hg(OAc)₂ (E. Merck) were prepared by dissolving the weighed samples in triple distilled water. Perchloric acid (60%) (S. G. Fine) was used as a source of H⁺ ion. A solution of RhCl₃ (Sigma Chemical Company) was prepared in HCl of known strength.</p> <p>* To whom all correspondence should be addressed, E-mail: she_1672@yahoo.com</p>
Title of the Paper/Vol./No./ Page	Rhodium (III) catalyzed oxidation of some amino acids by KBrO₃ in acidic medium, 12 no.-3, 313-320		
Department of the Teacher	Chemistry		
Name of the Journal	J. of Saudi Chemical Soc.		
Year of Publication	2008		
ISSN	1319-6103		
Link of the recognition in UGC enlistment of the Journal			
192	Name of the Author	Sheila Srivastava	<p style="text-align: center;">J. Saudi Chem. Soc., Vol. 12, No. 3, pp. 321-328 (2008) 321</p> <p style="text-align: center;">KINETICS AND MECHANISM OF RHODIUM(III) CATALYZED OXIDATION OF GLYCEROL BY ACIDIFIED SODIUM PERIODATE</p> <p style="text-align: center;">Sheila Srivastava*, Sangeta Srivastava and Arif Jalawal Chemical Laboratories, Feroze Gandhi College, Raebareilly – 226001, U.P., India. (Received 19th Jan. 2008, Accepted 10th June 2008)</p> <p>تم دراسة حركية أكسدة الجليسرول في محلول حمضي من بيروكسيدات البوتاسيوم في وجود حفاز روديوم(III) كبريتات. تم إجراء دراسات حركية في 30-40 °C، وأظهرت نتائج أن ترتيب التفاعل الكلي هو 1.5 في الأحمين الحامضين و 2.5 في الأمينات الأولية. تم إجراء دراسة حركية في الأحمين الحامضين والأمينات الأولية في وجود حفاز روديوم(III) كبريتات في وسط حمضي من بيروكسيدات البوتاسيوم. تم إجراء دراسات حركية في 30-40 °C، وأظهرت نتائج أن ترتيب التفاعل الكلي هو 1.5 في الأحمين الحامضين و 2.5 في الأمينات الأولية.</p> <p>The kinetics of the Rh(III) catalyzed oxidation of glycerol in an acidified solution of NaIO₄ in the presence of Hg(OAc)₂ as a scavenger, have been studied in the temperature range 30-40 °C. The rate shows zero order with respect to the substrate and 1st order with respect to catalyst Rh(III). Negligible effect of ionic strength Hg(OAc)₂ and ionic strength of the medium was observed and the reaction showed no effect of [H₂O₂], [Cl⁻] and [H⁺] ion concentrations on the reaction rate. A suitable mechanism in conformity with the kinetic observations has been proposed and the thermodynamic parameters computed.</p> <p>Keywords: Kinetics, Rh(III), oxidation, glycerol, acidic sodium periodate.</p> <p>EXPERIMENTAL INTRODUCTION Potassium bromate [KBrO₃] [1-5] and NaIO₄ [9] have been used as an oxidant for various compounds in acidic medium. Nitrososuccinimide [10-13], Nitrososuccinimide [14-15] have been earlier used in oxidation of various compounds in presence of catalyst. A little attention has been paid to reactivity of sodium periodate [16-19] as an oxidant in various catalyzed reactions. The work on kinetics and mechanism of Rh(III) catalyzed oxidation of 1,2-glycols [20] and polyhydric alcohols by acidic KBrO₃ [21] has also been reported. Nearly no investigation has so far been reported on the catalytic role of Rhodium(III) chloride with NaIO₄ as an oxidant. This fact prompted the present investigation namely the oxidation of glycerol by acidified NaIO₄ in the presence of Rh(III) chloride as a catalyst.</p> <p>Materials: An aqueous solution of glycerol (E. Merck), sodium periodate (S. D. Fine Chem. A. R.) NaClO₄ and Hg(OAc)₂ (E. Merck) were prepared by dissolving the weighed amount of samples in triple distilled water. Perchloric acid (60%) of E. Merck grade was used as a source of hydrogen ions. A RhCl₃ (Sigma Chemical Company) solution was prepared in HCl of known strength (0.018N). All other reagents were of analytical grade. Reaction vessels were painted black to prevent photochemical decomposition.</p> <p>Kinetics: The requisite volume of all reagents, including substrate, were thermostated at 35 ± 0.1 °C to attain equilibrium. A measured volume of NaIO₄ solution maintained separately at the same temperature was rapidly poured into the reaction vessel. Progress of the reaction was followed by assaying aliquots of the reaction mixture for</p> <p>* To whom all correspondence should be addressed, e-mail: She_1672@yahoo.com</p>
Title of the Paper/Vol./No./ Page	Kinetics and Mechanism of Rhodium(III) catalyzed oxidation of glycerol by acidified sodium periodate, 12 no.-3, 321-328		
Department of the Teacher	Chemistry		
Name of the Journal	J. of Saudi Chemical Soc.		
Year of Publication	2008		
ISSN	1319-6103		
Link of the recognition in UGC enlistment of the Journal			

193	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Kinetics of Ru(III) catalyzed oxidation of some amino acids by NBS in acidic medium, 12 no-2, 211-220
	Department of the Teacher	Chemistry
	Name of the Journal	J. of Saudi Chemical Soc.
	Year of Publication	2008
	ISSN	1319-6103
	Link of the recognition in UGC enlistment of the Journal	

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KINETICS OF RUTHENIUM(III) CATALYZED OXIDATION OF SOME AMINO ACIDS BY N-BROMOSUCCINIMIDE IN ACIDIC MEDIUM

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الدراسة الحركية لأكسدة بعض الأحماض الأمينية بواسطة N-بروموسكسينيميد (NBS) في وسط حمضي في وجود حفاز روثينيوم (III) كالحامض عضوي. تم إجراء الدراسة في نطاق درجة الحرارة من 30°C إلى 45°C. تم حساب عامل السرعة (k) في كل درجة حرارة. تم إجراء دراسة تأثير تركيز NBS و تركيز الحافز Ru(III) على سرعة التفاعل. تم إجراء دراسة تأثير درجة الحموضة (pH) على سرعة التفاعل. تم إجراء دراسة تأثير تركيز NBS و تركيز الحافز Ru(III) على سرعة التفاعل. تم إجراء دراسة تأثير درجة الحموضة (pH) على سرعة التفاعل. تم إجراء دراسة تأثير تركيز NBS و تركيز الحافز Ru(III) على سرعة التفاعل. تم إجراء دراسة تأثير درجة الحموضة (pH) على سرعة التفاعل.

The kinetics and mechanism of Ru(III) catalyzed oxidation of aromatic and aliphatic acids by N-bromosuccinimide (NBS) have been investigated in acidic medium in the presence of benzoic acetate as a reactant in the temperature range 30°C - 45°C. The reaction order is first order with respect to rate of oxidation in NBS, [Ru(III)] and [H⁺], respectively. A small increase in rate is observed with increase in [Cl⁻]. A kinetic order of reaction with respect to [H⁺] has been observed. Various kinetic parameters such as energy of activation (E_a), Arrhenius factor (A), entropy of activation (ΔS[‡]) have been calculated. The mechanism of the reaction is discussed in terms of kinetic results.

INTRODUCTION
Oxidative decarboxylation of amino acids is one of the well documented biochemical processes. Many reports are available in the literature on the kinetics of oxidation of amino acids by a variety of oxidants [1-3]. However, earlier mechanism of the chemical process is not well understood. Therefore, there remains a need for further experimental work. NBS is a mild and selective oxidant for many organic compounds [4]. The ability of Ruthenium(III) chloride as a non toxic and homogeneous catalyst has been reported earlier in our laboratory [5-12]. So far, little attention has been paid to the activity of NBS in the oxidation of amino acids in acidic media. Here, we report the results of kinetic and mechanistic studies of the oxidation of some amino acids in the presence of Ru(III) as a catalyst by NBS in acidic medium.

EXPERIMENTAL
An aqueous solution of NBS was prepared fresh each day from 5.8 g (0.026 mole) of the reagent, and its strength was checked iodometrically [13]. Aqueous solution of amino acids (F. Merck), sodium perchlorate, succinimide and sodium acetate (E. Merck) was prepared by dissolving the weighed amount of sample in triple distilled water. Perchloric acid (85%) of L. Merck grade was used as a source of hydrogen ions. Ruthenium(III) chloride (Johnson Matthey) was prepared by dissolving the sample in HCl of known strength. The reaction mixtures were standardized from sodium to avoid any possible photochemical decomposition.

Kinetics
A thermostated water bath was used to maintain the desired temperature within ± 0.1°C.

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194	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	A kinetic study of Ru(III) catalyzed oxidation of Dextrose by potassium bromate in alkaline medium, 3(3), 153-157
	Department of the Teacher	Chemistry
	Name of the Journal	IJPAC
	Year of Publication	2008
	ISSN	0973-3876
	Link of the recognition in UGC enlistment of the Journal	

International Journal of Pure & Applied Chemistry 3(3), July-September 2008; pp. 153-157

A Kinetic Study of Ru(III) Catalyzed Oxidation of Dextrose by Potassium Bromate in Alkaline Medium

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ABSTRACT: Kinetic investigation of ruthenium(III) catalyzed oxidation of dextrose by an alkaline solution of KBrO₃ has been carried out in the temperature range 30-45°C. Manganese acetate is used in the reaction mixture as a scavenger for H⁺ ions to prevent pseudo first order behavior. The reaction exhibits first order kinetics with respect to KBrO₃ and catalyst Ru(III) while zero order kinetics with respect to dextrose. An increase in [Cl⁻] showed negative effect while acetic acid (AcOH) showed positive effect.

Negligible effect of [OH⁻], ionic strength and ionic strength of the medium was observed. Ruthenium(III) chloride has been reported to give a number of possible chloro species depending on the pH of solution. The reactive species of Ru(III) in alkaline medium is [RuCl₂(OH)₂]⁻ under the experimental pH range. A suitable mechanism in conformity with the kinetic observations has been proposed.

The various activation parameters such as energy of activation (E_a), Arrhenius factor (A), entropy of activation (ΔS[‡]) were calculated from the rate measurements at 30°, 35°, 40°, and 45°C. A rate law has been derived on the basis of obtained data.

Introduction
Potassium bromate (KBrO₃) has been used to oxidize various compounds in acidic medium [1]. Some attention has been paid to the activity of KBrO₃ in the presence of catalyst [2]. The use of Ru(III) as non toxic and homogeneous catalyst has been reported by several workers [3,4] in acidic medium, but nearly no work has been done to avoid the mode of catalyzed reaction in alkaline medium. The proposed aim is to undertake the present investigation, which consists of the kinetics and mechanism of Ru(III) catalyzed oxidation of dextrose by bromate in alkaline medium with acetate acetate as a scavenger.

Experimental
Materials
Aqueous solution of dextrose (F. Merck), potassium bromate (B.H.L. An), NaClO₄ and Hg(OAc)₂ (E. Merck) were prepared by dissolving the weighed amount of sample in triple distilled water. NaOH (S.D. fine) was used as a source of OH⁻ ions. Ruthenium(III) chloride (Johnson Matthey) was prepared by dissolving the sample in HCl of known strength. The reaction mixtures were prepared blank as usual to prevent photochemical effects.

Kinetics
A thermostated water bath was used to maintain the desired temperature within ± 0.1°C. Reaction volume of reagent including substrate, was taken in a reaction vessel and thermostated at 35 ± 0.1°C for thermal equilibrium. A measured volume of KBrO₃ solution, which was also maintained separately at the same temperature, was rapidly poured into the reaction vessel. The kinetics was followed by examining desired portions of reaction mixture for KBrO₃ iodometrically using starch in an indicator after suitable time intervals.

Result and Discussion
The stoichiometric analysis of the oxidation of dextrose with potassium bromate indicates that one mole of oxidant reacts with one mole of dextrose. The product analysis by conventional method, shows the formation of an acid after the reaction. Thus, over all reaction may be represented as:

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No. 2672/08/ptm/chem

195	Name of the Author	Sheila Srivastava	<p style="text-align: right;"><i>(Citation Communications 31, No. 1, 853-859 (2008))</i></p> <p>Pd(II) CATALYSIS IN OXIDATION OF D-GLUCOSE BY CHLORAMINE-T IN ACIDIC MEDIUM. A KINETIC STUDY</p> <p>SH. SRIVASTAVA*, P. SINGH <i>Chemical Laboratories, Ferrous Gandhi College, 229 007 Raebarech, (U.P.) India E-mail: she_sll72@yahoo.com</i></p> <p>ABSTRACT</p> <p>Kinetic investigations on Pd(II)-catalysed oxidation of D-glucose by acidic solution of chloramine-T in the presence of mercuric acetate, as a scavenger have been made in the temperature range of 30–45°C. The rate shows first order kinetics in case of chloramine-T and order of reaction is zero and one with respect to substrate and Pd(II), respectively. Increase in [Cl⁻] showed positive effect, while [H⁺] showed zero effect.</p> <p>Negligible effect of mercuric acetate and ionic strength of the medium was observed. A transient complex formed between PdCl₂ and chloramine-T, PdCl₂, being the reactive species of palladium(II) chloride, disproportionates in a slow and rate-determining step. Various activation parameters have been calculated. A suitable mechanism in agreement with observed kinetics has been proposed.</p> <p><i>Keywords:</i> Pd(II) chloride, chloramine-T, D-glucose.</p> <p>AIMS AND BACKGROUND</p> <p>The kinetics and mechanism of Pd(II)-catalysed oxidation of some compounds by chloramine-T in perchloric acid medium has been reported¹⁻⁴.</p> <p>Chloramine-T has been used as an oxidant in oxidation of some compounds such as amino alcohols⁵ and <i>n</i>-sawino acids⁶, etc. The catalytic as well as inhibition action of Pd(II) in various redox reactions has been reported over the past decade, there has been a considerable interest on the speciation of aqueous PdCl₂ solutions and complexes⁷⁻⁹ of Pd(II) with Cl⁻ ions. The use of Pd(II) chloride as a non-toxic and homogeneous catalyst has been reported by several workers¹⁰⁻¹². Similar work has been done for Pd(II)-catalysed oxidation by chloramine-T which prompted us to undertake the kinetic study of Pd(II)-catalysed oxidation of D-glucose by chloramine-T in acidic medium.</p> <p style="text-align: center;">* For correspondence.</p> <p style="text-align: right;">855</p>
	Title of the Paper/Vol./No./ Page	Pd(II) catalysis in oxidation of D-glucose by Chloramine-T in acidic medium: A kinetic study 31(4), 853-859	
	Department of the Teacher	Chemistry	
	Name of the Journal	Oxid. Commun.,	
	Year of Publication	2008	
	ISSN	0209-4541	
	Link of the recognition in UGC enlistment of the Journal		

196	Name of the Author	Sheila Srivastava	<p style="text-align: center;"><i>International Journal of Pure & Applied Chemistry 30(4)(March-December 2008) pp. 117-121</i></p> <p>Mechanistic Study of Palladium(II) Catalyzed Oxidation of Ethylene Glycol by Periodate in Aqueous Perchloric Acid Medium</p> <p>Sheila Srivastava*, Anil Jaiswal and Sangeeta Srivastava <i>Chemical Laboratories, Ferrous Gandhi College, Raebarech-229007, U.P., India</i></p> <p>ABSTRACT: The kinetics of Palladium(II) catalyzed oxidation of ethylene glycol by sodium periodate in acidic medium has been studied in the temperature range 30-45°C. The reaction is carried out in the presence of sodium acetate as a scavenger for the side ion. The rate shows first order kinetics with respect to the oxidant (i.e., sodium periodate) and Pd(II) for ethylene glycol while zero order kinetics with respect to substrate is observed. Negligible effect of mercuric acetate and ionic strength of the medium was observed and the reaction showed negative effect with respect to [Cl⁻] and [H⁺] on the reaction rate. A suitable mechanism in conformity with the kinetic observations has been proposed and the homoelementary processes considered.</p> <p><i>Keywords:</i> Kinetics, Pd(II), oxidation, acidic sulfate periodate.</p> <p>Introduction</p> <p>Oxidants like N-Acetylacetamide¹⁰, Potassium Permanganate¹¹ etc. have been earlier used in oxidation of various compounds in presence of catalyst. The Pd(II) heterogeneous catalysis of potassium oxidation of ethylene glycol in perchloric acid has been studied. A little work has been reported on Pd(II) catalyzed oxidation of sodium periodate in acidic medium¹²⁻¹⁴. This prompted us to undertake the present investigation on Pd(II) catalyzed oxidation of ethylene glycol by periodate in acidic medium.</p> <p>Experimental</p> <p>Materials and Method</p> <p>An aqueous solution of ethylene glycol (E. Merck), sodium periodate (S. D. Fine), sodium perchlorate and mercuric acetate (A. R. Merck) were prepared by dissolving the weighed amount of sample in triple distilled water. Perchloric acid (50%) of E. Merck grade was used as a source of hydrogen ions. Pd(II) chloride (Qualigens) was prepared by dissolving the sample in perchloric acid of known strength, all other reagents of analytical grade were available. Sodium perchlorate (E. Merck) was used to maintain the ionic strength of the medium. The reaction vials were blackened five minutes to prevent photochemical action.</p> <p>Results</p> <p>Relative volumes of all reagents, including substrate, were kept as a constant and allowed to reach at 25°C for thermal equilibrium. A measured volume of sodium periodate solution, also measured accurately at the same temperature, was rapidly added into the reaction vessel. Progress of the reaction was followed by analyzing aliquots of the reaction mixture for chlorinated acetaldehyde, inductively coupled plasma atomic emission spectroscopy.</p> <p>Result and Discussion</p> <p>The mechanistic study of the oxidation of ethylene glycol with sodium periodate indicates that two species of oxidant ions with one major substrate. The product analysis by conventional method shows the formation of an acid after the reaction. Thus over all reaction may be represented as</p> $ \begin{matrix} \text{EtOH} & + & \text{H}^+ & \rightleftharpoons & \text{EtOH}_2^+ \\ \text{EtOH} & & & & \\ \text{Ethylene glycol} & & & & \text{Glycolic acid} \end{matrix} $ <p><i>For correspondence: she_sll72@yahoo.com</i></p>
	Title of the Paper/Vol./No./ Page	Mechanistic Study of palladium (II) Catalysed Oxidation of Ethylene Glycol by Periodate in Aqueous Perchloric Acid Medium	
	Department of the Teacher	Chemistry	
	Name of the Journal	IJPAC	
	Year of Publication	2008	
	ISSN	0973-3876	
	Link of the recognition in UGC enlistment of the Journal		

197	Name of the Author	Sheila Srivastava	<p><i>International Journal of Pure & Applied Chemistry</i> 3(2), (April-June 2008) pp. 105-109</p> <p>Rhodium(III) Catalyzed Oxidation of Cyclopentanone and Cyclohexanone by Acidic Sodium Periodate: A Kinetic Study</p> <p>Sheila Srivastava*, Shalini Singh, Sangeeta Srivastava, Parul & Pushpanjali Singh</p> <p><i>Chemical Laboratories, Feroze Gandhi College, RaeBareilly-229001, U. P., India</i></p> <hr/> <p>ABSTRACT: The kinetics of rhodium(III) catalyzed oxidation of cyclopentanone and cyclohexanone by sodium periodate in acidic medium have been studied in the temperature range 30-45 °C. The reaction was carried out in the presence of mercuric acetate as a scavenger. The rate showed first-order kinetics with respect to the oxidant i.e. sodium periodate and catalyst Rh(III) chloride for both cyclopentanone and cyclohexanone. Both the substrate cyclopentanone and cyclohexanone showed first order kinetics at its lower concentration tending to zero order at higher concentration. Insignificant influence of mercuric acetate and ionic strength of the medium were observed while the reaction showed no effect of [Cl⁻] and [Br⁻] on the reaction rate for both cyclopentanone and cyclohexanone. Various activation parameters have been calculated. A suitable mechanism in agreement with observed kinetics has been proposed.</p> <p>Keywords: kinetics, Rh(III), oxidation, cyclic-ketones, acidic sodium-periodate</p> <hr/> <p>Introduction</p> <p>Potassium bromate [1-3], N-bromoacetamide [6-9], N-bromosuccinimide [10-13] etc. have been used as an oxidant in various catalyzed reactions. A little attention has been paid to sodium periodate [14-17] as an oxidant in various catalyzed reactions. The use of Rh(III) chloride as a catalyst has been reported by several workers. Kinetics and mechanism of rhodium(III) catalyzed oxidation of 1,2 glycols [18] and polyhydric alcohols by acidic potassium bromate were also reported [19]. But no work has been reported on Rh(III) catalyzed oxidation of sodium periodate in acidic medium. This prompted us to undertake the present investigation which consists of Rh(III) catalyzed oxidation of cyclopentanone and cyclohexanone by sodium periodate in acidic medium.</p> <p>Experimental</p> <p>An aqueous solution of cyclopentanone and cyclohexanone (S. D. Fine), sodium periodate (S. D. Fine), mercuric acetate and sodium perchlorate (all E. Merck) were prepared by dissolving the weighed samples in triple distilled water. Perchloric acid (E. Merck, 60%) was used as source of hydrogen ions. Rhodium(III) chloride (Johnson Matthey) was prepared by dissolving the sample in hydrochloric acid of known strength. All other reagents of analytical grade were available. Sodium perchlorate (E. Merck) was used to maintain the ionic strength of the medium. The reaction flasks were blackened from outside to prevent photochemical effects.</p> <p>All the reagents except the oxidant (NaIO₄) were allowed to mix in a reaction vessel and thermostated at 35 °C for thermal equilibrium. A measured volume of sodium periodate solution equilibrated separately at the same temperature was rapidly poured into the reaction vessel. The progress of the reaction was monitored by determining unreacted NaIO₄ iodometrically at regular time intervals using starch as an indicator.</p> <p>Stoichiometry and Product Analysis</p> <p>The stoichiometry of the reaction was determined by equilibrating varying ratios of [NaIO₄] to cyclopentanone and cyclohexanone separately at 35 °C for 48 h under kinetic conditions. Estimation of unreacted NaIO₄</p>
	Title of the Paper/Vol./No./ Page	Rhodium(III) catalyzed oxidation of cyclopentanone and cyclohexanone by acidic sodium periodate: a kinetic study, 3(2), 105-109	
	Department of the Teacher	Chemistry	
	Name of the Journal	IJPAC	
	Year of Publication	2008	
	ISSN	0973-3876	
	Link of the recognition in UGC enlistment of the Journal		
198	Name of the Author	Sheila Srivastava	<p><i>Oxidation Communications</i> 30, No 3, 553-560 (2007)</p> <p>MECHANISTIC STUDY OF IRIIDIUM(III) CATALYSED OXIDATION OF GLYCEROL BY N-BROMOACETAMIDE IN ACIDIC MEDIUM</p> <p>SH. SRIVASTAVA*, V. SRIVASTAVA, V. GUPTA, L. CHAUDHARY</p> <p><i>Chemical Laboratories, Feroze Gandhi College, 229 001 Rae Bareilly, U.P., India</i> E-mail: she_ila72@yahoo.com</p> <hr/> <p>ABSTRACT</p> <p>Kinetic investigations on iridium(III) catalyzed oxidation of glycerol by acidic solution of N-bromoacetamide (NBA) in the presence of Hg(OAc)₂ as a scavenger for Br⁻ have been studied in the temperature range of 30-45°C. The reactions exhibit a zero order dependence with respect to polyhydric alcohol and first order at low concentration range of NBA was observed to tend to zero order at its higher concentrations. The influence of Hg(OAc)₂ and ionic strength is insignificant. A negative fractional order in both [H⁺] and [Cl⁻] and a positive fractional order in Ir(III) are observed whereas successive addition of acetamide decreases the rate of oxidation. A suitable mechanism, consistent with the observed kinetic data is proposed and activation parameters are calculated.</p> <p>Keywords: oxidation, Ir(III) catalyst, glycerol, N-bromoacetamide.</p> <hr/> <p>AIMS AND BACKGROUND</p> <p>Some papers have recently been devoted to the kinetics and mechanism of uncatalyzed oxidation of few alcohols¹, dimethylsulphoxide² and ketones^{3,4} by NBA, which was earlier used as a halogenating and oxidising agent in the estimation of several compounds⁵. While N-bromosuccinimide (NBS), N-chlorosuccinimide (NCS), chloramine-T (CAT), bromamine-T (BAT) and chloramine-B (CAB) have received substantial attention to clarify the mechanism of their reactions with several reducing substances in recent years⁶⁻¹⁰, very little attention has been paid to the mode of NBA oxidation. The kinetics of the redox reactions incorporating certain transition metal ions like osmium(VIII), ruthenium(III), ruthenium(VIII) and palladium ions as homogeneous catalyst has been extensively investigated¹¹⁻¹⁶ from a mechanistic point of view. However, the reactions involving iridium(III) chloride as homogeneous catalyst^{17,18} have been little investigated. This fact prompted us to undertake the present work on</p>
	Title of the Paper/Vol./No./ Page	Mechanistic study of Iridium(III) catalysed oxidation of glycerol by N-bromoacetamide in acidic medium, 30(3), 553-560,	
	Department of the Teacher	Chemistry	
	Name of the Journal	Oxid. Commun.,	
	Year of Publication	2007	
	ISSN	0209-4541	
	Link of the recognition in UGC enlistment of the Journal		

199	Name of the Author	Sheila Srivastava	<p style="text-align: right;"><i>Oxidation Communications</i> 30, No 3, 561-567 (2007)</p> <p>KINETIC STUDY OF Ru(III) CATALYSED OXIDATION OF CYCLOPENTANONE BY POTASSIUM BROMATE IN ALKALINE MEDIUM</p> <p>SH. SRIVASTAVA*, L. CHAUDHARY <i>Chemical Laboratories, Feroze Gandhi College, 229 001 Rae Bareilly, India</i> <i>E-mail: she_11a72@yahoo.com</i></p> <p>ABSTRACT Kinetic investigation in ruthenium(III) catalysed oxidation of cyclopentanone by an alkaline solution of KBrO_3 has been carried out in the temperature range 30–45°C. Mercuric acetate was used as a scavenger for Br^- ion in the reaction mixture to prevent parallel oxidation by bromine. The reaction exhibits zero order kinetics with respect to KBrO_3. The order of reaction with respect to substrate cyclopentanone and catalyst Ru(III) is unit. An increase in $[\text{Cl}^-]$ showed positive effect while increase in $[\text{OH}^-]$ showed negative effect. Negligible effect of mercuric acetate and ionic strength of the medium was observed. Ruthenium(III) chloride has been reported to give a number of possible chloro species depending on the pH of solution. The reactive species of Ru(III) in alkaline medium is $[\text{RuCl}_2(\text{H}_2\text{O})(\text{OH})^-]$ under the experimental pH range. A suitable mechanism in conformity with the kinetic observation has been proposed. The various activation parameters such as energy of activation (AE), the Arrhenius factor (A), entropy of activation (ΔS^\ddagger) were calculated from the rate measurements at 30, 35, 40 and 45°C. A rate law has been derived on the basis of obtained data. Keywords: kinetics, mechanism, oxidation, cyclopentanone, potassium bromate, Ru(III) catalyst.</p> <p>AIMS AND BACKGROUND Potassium bromate (KBrO_3) has been used to oxidise various compounds in acidic medium¹⁻⁴. Scant attention has been paid to the activity of KBrO_3 in the presence of catalyst⁵⁻⁷. The use of Ru(III) as non toxic and homogeneous catalyst has been reported by several researchers⁸⁻¹⁴. In acidic medium, but nearly no work has been done to reveal the mode of catalysed reaction in alkaline medium. This prompted us to undertake the present investigation, which is focused on the kinetics and mechanism</p> <p style="text-align: right;">561</p>
	Title of the Paper/Vol./No./ Page	A kinetic study of Ru(III) catalyzed oxidation of cyclopentanone by potassium bromate in alkaline medium, 30(3), 561-567,.	
	Department of the Teacher	Chemistry	
	Name of the Journal	Oxid. Commun.,	
	Year of Publication	2007	
	ISSN	0209-4541	
	Link of the recognition in UGC enlistment of the Journal		
200	Name of the Author	Sheila Srivastava	<p style="text-align: right;">Mechanism of..... by Sheila Srivastava et al. Bulletin of the Catalysis Society of India, 6 (2007) 119-124.</p> <p>Mechanism of Rhodium(III) Catalyzed Oxidation of Ethylene Glycol by Bromate in Acidic Medium.</p> <p>Sheila Srivastava*, Parul Srivastava, Ashish Kumar and Shaili Singh <i>Chemical Laboratories, Feroze Gandhi College, Raebareilly – 229001, U.P., India.</i> <i>E-mail: she_11a72@yahoo.com</i> *Author for correspondence.</p> <p>Abstract: Kinetic investigation in Rh(III) catalyzed oxidation of ethylene glycol in an acidified solution of potassium bromate in the presence of $\text{Hg}(\text{OAc})_2$ as a scavenger, have been studied in the temperature range of 30°–45° C. The reaction exhibits first order kinetics with respect to KBrO_3 and catalyst Rh(III) while zero order kinetics with respect to substrate and HClO_4. The influence of $\text{Hg}(\text{OAc})_2$, ionic strength and Cl^- ion on the rate was found to be insignificant. Mercuric acetate is used in the reaction mixture as a scavenger for Br^- ion to prevent parallel oxidation by bromine. A suitable mechanism in conformity with the kinetic observations has been proposed and the rate law is derived on the basis of obtained data. The various activation parameters such as energy of activation (ΔH^\ddagger), Arrhenius factor (A), entropy of activation (ΔS^\ddagger) were calculated from the rate measurements at 30°, 35°, 40° and 45°C. The rate law has been derived on the basis of obtained data. Key Words: Bromate, Catalysis, Oxidation, Rhodium(III), acidic.</p> <p>INTRODUCTION: Potassium bromate (KBrO_3) has been used to oxidized various compounds in acidic medium.¹¹⁻¹⁰ Scant attention has been paid to activity of KBrO_3 in the presence of catalyst,^{11,12} but the results have not been interpreted so as to reveal a clear picture of the mode of catalyzed process. The use of Rh(III) as a non-toxic and homogeneous catalyst has been reported by several workers^{13,14} in acidic medium. This prompted us to undertake the present investigation which consist of “Rh(III) catalyzed oxidation of ethylene glycol in an acidified solution of potassium bromate with mercuric acetate as a scavenger.”</p> <p>EXPERIMENTAL: Materials: An aqueous solution of ethylene glycol (E.Merck), potassium bromate (KBrO_3, AR), NaClO_4 and $\text{Hg}(\text{OAc})_2$ (E.Merck) were prepared by dissolving the weighed samples in triple distilled water. Perchloric acid (60%, S.d.fine) was used as a source of H^+ ion. A solution of RhCl_3 (Sigma Chemical Company) was prepared in HCl of known strength. Deuterium oxide (purity 99.4%) was supplied by BARC (Bombay, India). All other reagents were of analytical grade were available. Sodium perchlorate was used to maintain the ionic strength of the medium. Reaction vessels were painted black so as to prevent photochemical decomposition, if any. Kinetics: A thermostated waterbath was use to maintain the desired temperature within $\pm 0.1^\circ\text{C}$. requisite volume of reagents including substrate, were taken in a reaction vessel and thermostated at $35 \pm 0.1^\circ\text{C}$ for thermal equilibrium. A measured volume of KBrO_3 solution, which was also maintained separately at the same temperature, was rapidly poured into the reaction vessel. The kinetics was</p> <p style="text-align: right;">119</p>
	Title of the Paper/Vol./No./ Page	Mechanism of Rhodium(III) catalyzed oxidation of ethylene glycol by bromate in acidic medium, 6,119-124,.	
	Department of the Teacher	Chemistry	
	Name of the Journal	Bull. Catal. Soc. India	
	Year of Publication	2007	
	ISSN	1566-7367	
	Link of the recognition in UGC enlistment of the Journal		

201	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Kinetics and Mechanism of Ru(III) catalyzed oxidation of some polyhydric alcohols by acid bromate,84, 1109-1113,.
	Department of the Teacher	Chemistry
	Name of the Journal	J.Indian Chem. Soc.
	Year of Publication	2007
	ISSN	0019-4522
	Link of the recognition in UGC enlistment of the Journal	

J. Indian Chem. Soc., Vol. 84, November 2007, pp. 1109-1113

Kinetics and mechanism of the ruthenium(III) catalyzed oxidation of some polyhydric alcohols by acid bromate

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Manuscript received 9 April 2007, revised 28 August 2007, accepted 29 August 2007

Abstract: Ruthenium(III) catalyzed oxidation of some polyhydric alcohols described and discussed in acidic solution of potassium bromate by the presence of mercuric acetate as a scavenger for Br⁻ ion have been made in the temperature range 30-45°C. The reaction exhibits consecutive rate dependence with respect to each polyhydric alcohol and first order at low concentration range of KBrO₃ was observed in both in dependence of its higher concentration. A suitable mechanism consistent with the experimental results has been proposed.

Keywords: Ruthenium(III), polyhydric alcohols, oxidation.

In continuation of our earlier work on the oxidation of amino acids^{1,2}, cyclic alcohols³, cyclic ketones⁴, glyceral⁵ and mallose⁶ by potassium bromate in acidic as well as alkaline media in the presence of ruthenium(III) we have presented our study on Ruthenium(III) catalyzed oxidation of some polyhydric alcohols by acid bromate.

Experimental
Aqueous solution of polyhydric alcohols (Thomas Baker), potassium bromate (S.D. Fine Chem. Ltd.), and mercuric acetate and mercuric acetate (E. Merck) were prepared by dissolving the weighed amount of sample in triple distilled water. Ruthenium(III) chloride (Johnson Matthey) was prepared by dissolving the sample in hydrochloric acid of known strength. All other reagents were of analytical grade, their concentration was maintained with NaCl 0.1 M.
Temperature was maintained to within ±0.1°C of the desired value. A measured volume of potassium bromate solution, maintained at the same temperature, was rapidly injected into the reaction vessel. The kinetics was followed by measuring absorbance (optical density) using starch as indicator after suitable time intervals.

Results:
Table 1 shows the stoichiometric results which reveal that two moles of bromate were consumed per mole oxidant.

Table 1. Stoichiometric results for oxidation of cyclopentanol and cyclohexanol

[Ox] ⁰ (mole/l)	[Ox] [∞] (percentage)	[BrO ₃ ⁻] (M) consumed	[BrO ₃ ⁻] (M) remaining	[BrO ₃ ⁻]/[Ox] [∞]	[Ox] [∞] (mole/l)
0.010	1.00	12.34	12.15	2.65	1.00
0.020	1.00	5.02	5.09	1.00	2.16
0.040	1.00	3.84	3.65	2.06	1.01
0.060	1.00	0.50	0.52	2.04	1.08
0.080	1.00	9.24	10.36	1.56	2.02
0.100	4.00	1.75	1.04	1.67	0.80
0.120	5.00	7.02	6.54	1.07	0.80

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202	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Acidic periodate oxidation of some cyclic alcohols in presence of Ru(III), 2(4), 391-395,.
	Department of the Teacher	Chemistry
	Name of the Journal	Int. J. of Pure & Applied
	Year of Publication	2007
	ISSN	0973-3876
	Link of the recognition in UGC enlistment of the Journal	

International Journal of Pure & Applied Chemistry 2(4), (October-December 2007) pp. 391-395

Acidic Periodate Oxidation of some Cyclic Alcohols in Presence of Ruthenium (III)

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ABSTRACT: Kinetic investigation on Ru(III) catalyzed oxidation of cyclopentanol and cyclohexanol by acidified solution of sodium periodate in the presence of mercuric acetate as a scavenger have been made in the temperature range of 30-45°C. The rate shows first order kinetics both in substrate and Ru(III), while order of reaction is zero with respect to periodate and hydrogen ions. Insignificant influence of mercuric acetate and ionic strength of the medium was observed, while the reaction showed negligible effect of [C] on the reaction rate. A transient complex, formed between Ru(III) and cyclic alcohol in a slow and rate determining step, reacts with periodate to give the product in a fast step, which leads to regeneration of the catalyst. D₂O had insignificant effect on the rate of the reaction. A suitable mechanism in conformity with the kinetic observations has been proposed and the thermodynamic parameters computed.

Keywords: Kinetics, Ru(III) chloride, catalyst, cyclic-alcohols, sodium periodate, oxidant.

Introduction
Oxidants like potassium bromate^{1,4}, N-bromoacetamide^{5,6} and N-bromosuccinimide^{6,10} have been earlier used in oxidation of various compounds. Scant attention has been paid on sodium periodate¹¹⁻¹⁵ as an oxidant. Ruthenium(III) chloride¹⁶⁻¹⁸ has been used as a non toxic and homogeneous catalyst by several workers but no work is reported on Ru(III) catalyzed oxidation by sodium periodate and the results have not been interpreted to reveal a clear picture of the mode of catalyzed processes. This prompted us to undertake the present investigation which consists of Ru(III) catalyzed oxidation of cyclopentanol and cyclohexanol by periodate in acidic medium in presence of mercuric acetate as a scavenger.

Experimental
An aqueous solution of cyclopentanol and cyclohexanol (E. Merck), sodium periodate (S. D. Fine), mercuric acetate and sodium perchlorate (all E. Merck) were prepared by dissolving the weighed sample in triple distilled water, perchloric acid (E. Merck, 60%) was used as source of hydrogen ions. Ruthenium(III) chloride (Johnson Matthey) was prepared by dissolving the sample in hydrochloric acid of known strength. Deuterium oxide (purity 99.4%) was supplied by BARC, Bombay, India. All other reagents were of highest quality available. The reaction vessels were painted black from outside to prevent photochemical effects.

Kinetics
Requisite volumes of all reagents, including substrate, were taken in a reaction vessel and thermostated at 35°C for thermal equilibrium. A measured volume of sodium periodate solution, also maintained separately at the same temperature, was rapidly poured into the reaction vessel. Progress of the reaction was followed by assaying aliquots of the reaction mixture for unreacted periodate, iodometrically using starch indicator, after suitable time intervals.

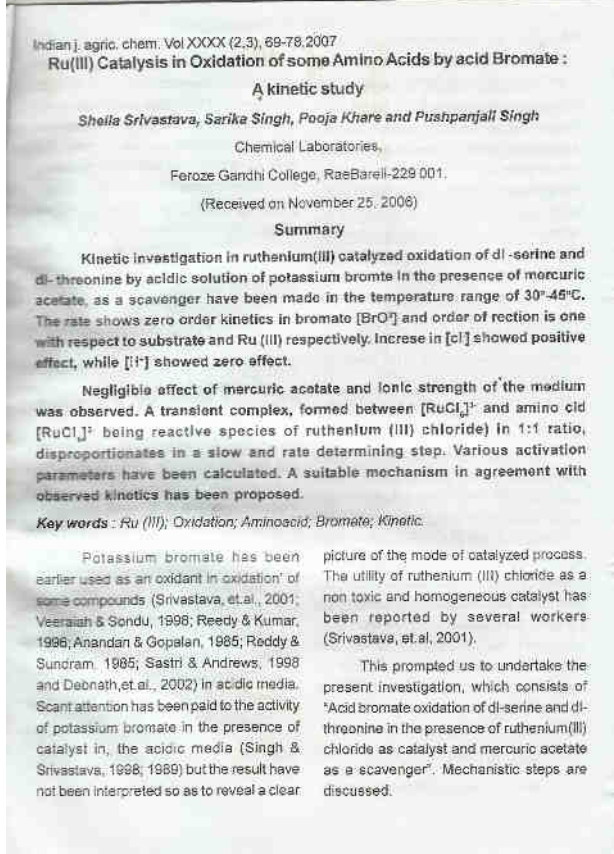
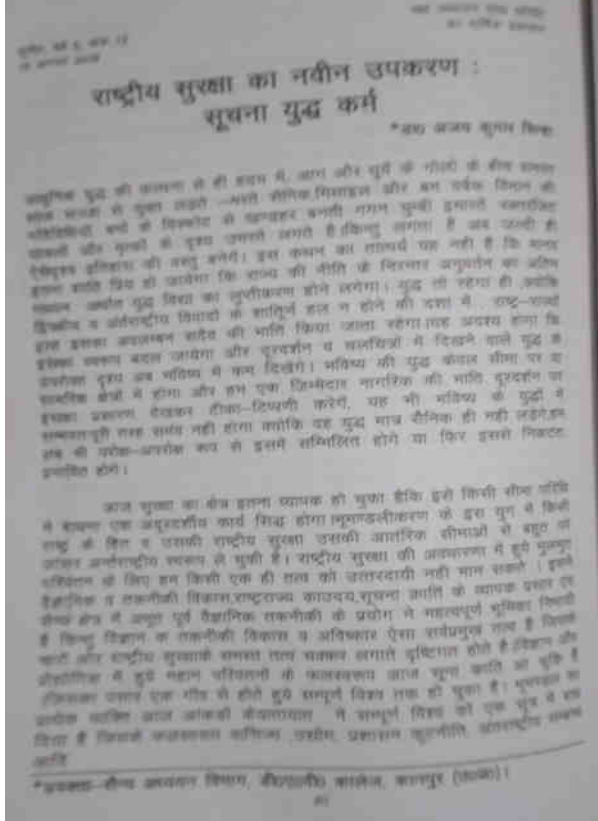
Results and Discussion
The stoichiometry of the reaction was ascertained by equilibrating the reaction mixture containing an excess of sodium periodate over cyclopentanol and cyclohexanol separately in varying ratios at 35°C for

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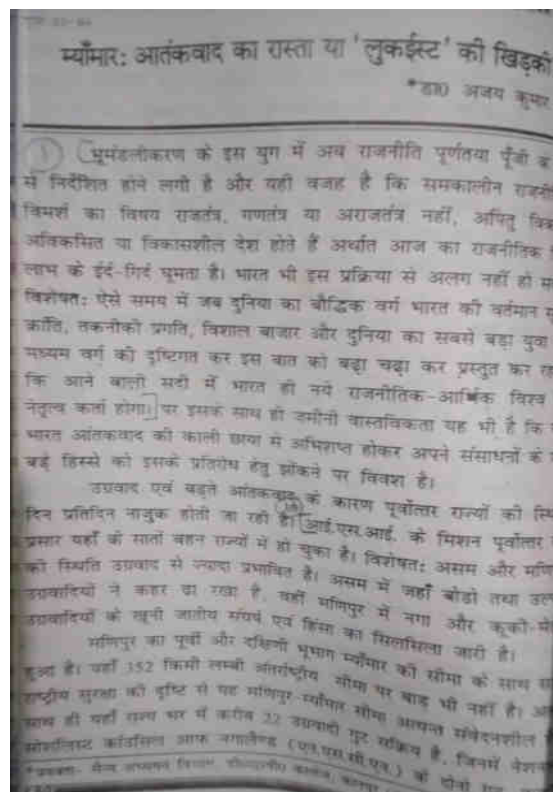
203	Name of the Author	Sheila Srivastava	<p style="text-align: center;">Kinetics and Mechanism of Rhodium(III) catalyzed oxidation of Mannitol by acidified Sodium periodate,</p> <p style="text-align: center;">Sheila Srivastava * Sangeeta Srivastava , Shalini Singh, Parul & Arti Jaiswal Chemical Laboratories, Feroze Gandhi College, Rae Bareilly – 229001, U.P., India . e-mail : She_ifa72@yahoo.com</p> <p>Abstract : The kinetics of the Rh(III) catalyzed oxidation of mannitol by an acidified solution of NaIO₄ in the presence of Hg(OAc)₂ as a scavenger, have been studied in the temperature range 30–45° C. The rate shows zero order with respect to the substrates and 1st order with respect to catalyst Rh(III). Negligible effect of mercuric acetate Hg(OAc)₂ and ionic strength of the medium was observed and the reaction showed no effect of change in concentration of [H₂O₂], [Cl⁻] and [H⁺] ion on the reaction rate. A suitable mechanism in conformity with the kinetic observations has been proposed and the thermodynamic parameters computed.</p> <p>Keywords : Kinetics, Rh(III), oxidation, mannitol, acidic sodium periodate.</p> <p>*Author for correspondence.</p> <p>Introduction Potassium bromate [KBrO₃]^(1,2) and [NaIO₄]⁽³⁾ have been used as an oxidant for various compounds in acidic medium. N-bromo-succinimide^(4,5), N-bromo-succinimide^(4,5) have been earlier used in oxidation of various compounds in presence of catalyst. A little attention has been paid to reactivity of sodium periodate^(6,7) as an oxidant in various catalyzed reactions. The work on kinetics and mechanism of Rh(III) catalyzed oxidation of 1, 2- glycols⁽⁸⁾ and polyhydric alcohols by acidic KBrO₃⁽⁹⁾ has also been reported. Nearly no investigation has so far been reported on the catalytic role of Rhodium(III) chloride with NaIO₄ as an oxidant. This fact prompted the present investigation namely the oxidation of glycerol by acidified NaIO₄ in the presence of Rh(III) chloride as a catalyst.</p> <p>Experimental Materials An aqueous solution of glycerol (E.Merck), Sodium Periodate (S.D. Fine Chem. A.R.) NaClO₄ and Hg(OAc)₂ (E. Merck), were prepared by dissolving the weighed amount of samples in triple distilled water. Perchloric acid (60%) of E.Merck grade was used as a source of hydrogen ions. A RhCl₃ (Sigma Chemical Company) solution was prepared in HCl of known strength (0.018N). All other reagents were of analytical grade. Reaction vessels were painted black to prevent photochemical decomposition.</p> <p>Kinetics The requisite volume of all reagents, including substrate, were thermostated at 35 ± 0.1° C to attain equilibrium. A measured volume of NaIO₄ solution maintained separately at the same temperature was rapidly poured into the reaction vessel. Progress of the reaction was followed by assaying aliquots of the reaction mixture for NaIO₄, iodometrically using starch as an indicator after suitable time intervals.</p> <p>Stoichiometry and product analysis The stoichiometry of the reaction was determined by equilibrating varying ratios</p> <p style="text-align: right;">140</p>
Title of the Paper/Vol./No./ Page	Kinetics and Mechanism of Rh(III) catalyzed oxidation of Mannitol by acid. sodium periodate, 6, 140-146..		
Department of the Teacher	Chemistry		
Name of the Journal	Bull. Catal. Soc. India		
Year of Publication	2007		
ISSN	1566-7367		
Link of the recognition in UGC enlistment of the Journal			
204	Name of the Author	Sheila Srivastava	<p style="text-align: center;">Indian j. agric. chem. Vol. XXXX (2.3), 89-95, 2007 Kinetics and Mechanism of Rhodium(III) Catalyzed Oxidation of Glycine by Acidified Potassium Bromate</p> <p style="text-align: center;">Sheila Srivastava, Parul Srivastava and Ashish Kumar Chemical Laboratories, Feroze Gandhi College, Raebareilly-2290 01, (Received on November, 22, 2006)</p> <p style="text-align: center;">Summary</p> <p>The kinetics of Rhodium(III) catalyzed oxidation of glycine in an acidified solution of KBrO₃ in the presence of Hg(OAc)₂ as a scavenger, have been studied in temperature range of 30°-45° C. The rate is first order in Rh(III) but zero order with respect to bromate. The rate decreases with increasing concentration of H⁺ ion, showing negative effect, while positive effect is exhibited w.r.t. substrate (glycine) and AcOH. The influence of Hg(OAc)₂, ionic strength and Cl⁻ ion on the rate was found to be insignificant. A suitable mechanism in conformity with the kinetic observations has been proposed and the rate law is derived on the basis of obtained data. The various thermodynamic parameters were calculated from rate measurements at 30, 35, 40 and 45 °C respectively.</p> <p>Key Words: - Bromate, Catalysis, Oxidation, Rhodium(III), acidic.</p> <p>Potassium bromate has been used to oxidize various compounds (Srivastava, 2001; Srivastava & Singh, 2004; Singh & Singh, 2001; Debnath et. al., 2004; Murthy, 2002; Singh & Srivastava, 1995). Little attention has been paid however, to the reactivity of KBrO₃ in the presence of catalyst (Singh & Srivastava, 1989; Srivastava, 1991) and no investigation has so far been reported on the catalytic role of rhodium(III) chloride with potassium bromate as an oxidant in acidic medium. This fact prompted us to undertake the present investigation namely, oxidation of glycine by acidified KBrO₃ in the presence of Rh(III) chloride as a catalyst and mercuric acetate as a scavenger for bromide ion.</p> <p style="text-align: center;">Experimental</p> <p>Materials: Aqueous solution of glycine (E. Merck), potassium bromate (BDH, AR), sodium perchlorate and Hg(OAc)₂ (E. Merck) were prepared by dissolving the weighed samples in triple distilled water. HCl O₄ (S. d. fine) was used as a source of H⁺ ions. A solution of RhCl₃ (Sigma</p>
Title of the Paper/Vol./No./ Page	Kinetics and Mechanism of Rh(III) catalyzed oxidation of Glycine by Acidified Potassium Bromate, 20(2,3), 89-95,		
Department of the Teacher	Chemistry		
Name of the Journal	Indian J. Agriculture Chemistry		
Year of Publication	2007		
ISSN	0367-8229		
Link of the recognition in UGC enlistment of the Journal			

205	Name of the Author	Sheila Srivastava	<p>Indian J. agric. chem. Vol. XXXX (2,3), 117-124, 2007</p> <p>Mechanistic study of Rh(III) Catalyzed Oxidation of Sucrose by Sodium periodate</p> <p><i>Sheila Srivastava and Shalini Singh</i></p> <p>Chemical Laboratories, Feroze Gandhi College, RaeBaroli-229 001, U.P., India.</p> <p>Summary</p> <p>The kinetics of Rhodium (III) catalyzed oxidation of sucrose by sodium periodate in acidic medium has been studied in the temperature range 30-45°C. The reaction is carried out in the presence of mercuric acetate as a scavenger. The rate shows first order kinetics with respect to the oxidant i.e. sodium periodate and Rh (III) chloride. Negligible effect of mercuric acetate, and ionic strength of the medium was observed, and the reaction showed no effect of [C1⁻] and [H⁺] on the reaction rate. A suitable mechanism in conformity with the kinetic observations has been proposed and the thermodynamic parameters computed.</p> <p>Key words : Rh (III) catalysis; Sucrose; Sodium periodate; Kinetic study;</p> <p>N-bromosuccinimide (Srivastava, et. al. 2003; Singh, et. al. 1992 & Srivastava, et. al. 2003); N-bromosuccinimide (Shukla & Upachayay, 1991; Surekha, et. al. 2001; Singh & Chopra, 1997 & Singh et al; 1998) and potassium bromate (Srivastava & Singh, 1988, 1988, 1992; Srivastava., 1994; Srivastava & Singh, 2004; Srivastava, et al., 2001 & Srivastava & Singh, 2004) etc. have been earlier used in oxidation of various compounds. A scant attention has been paid to sodium periodate (Srivastava & Singh, 2001; Gupta, et. al. 1999; Kable & Nardi Beawor, 1998 & Kaushik, et. al., 2004) as an oxidant in various catalyzed reactions. The use of Rhodium (III) chloride as a catalyst has been reported by several workers (Sandu, et. al.; 1990 & Srivastava, et. al.; 1999), but no work has been reported on Rh(III) catalyzed oxidation of sodium periodate in acidic medium. This prompted us to undertake the present investigation which consists of Rh(III) catalyzed oxidation of sucrose by periodate in acidic medium.</p> <p>Experimental</p> <p>Material</p> <p>An Aqueous solutions of sucrose (S.D. fine), sodium periodate (S.D. fine A. R.), mercuric acetate and sodium perchlorate (all E. Merck) was prepared by dissolving the weighed amount of sample in triple distilled water; perchloric acid (E. Merck, 90%) was used as source of hydrogen ions. Rhodium(III) chloride (Johnson Matthey) was prepared by dissolving the sample in hydrochloric acid of known strength. All other reagents of analytical grade were available.</p>
	Title of the Paper/Vol./No./ Page	Mechanistic study of Rh(III) catalyzed oxidation of Sucrose by Sodiumperiodate, 20(2,3), 117-124,	
	Department of the Teacher	Chemistry	
	Name of the Journal	Indian J. Agriculture Chemistry	
	Year of Publication	2007	
	ISSN	0367-8229	
Link of the recognition in UGC enlistment of the Journal			
206	Name of the Author	Sheila Srivastava	<p>Indian J. agric. chem. Vol XXXX (2,3), 79-87, 2007</p> <p>A Kinetic study of Ru(III) Catalyzed Oxidation of Cyclopentanone By Potassium Bromate in Alkaline Medium</p> <p><i>Sheila Srivastava, and Lakshmi Chaudhary</i></p> <p>Chemical Laboratories, Feroze Gandhi College, RaeBaroli-229 001.</p> <p>(Received on November 23, 2006)</p> <p>Summary</p> <p>Kinetic investigation in ruthenium(III) catalyzed oxidation of cyclopentanone by an alkaline solution of KBrO₃ have been carried out in the temperature range 30°- 45° C. Mercuric acetate is used in the reaction mixture as a scavenger for Br⁻ ion to prevent parallel oxidation by bromine. The reaction exhibits zero order kinetics with respect to KBrO₃. The order of reaction with respect to substrate cyclopentanone and catalyst Ru(III) is first. An increase in [C] showed positive effect while increase in [OH⁻] showed negative effect.</p> <p>Negligible effect of mercuric acetate and ionic strength of the medium was observed. Ruthenium(III) chloride has been reported to give a number of possible chloro species depending on the pH of solution. The reactive species of Ru(III) in alkaline medium is [RuCl₂(H₂O)(OH)]⁺ under the experimental pH range. A suitable mechanism in conformity with the kinetic observation has been proposed.</p> <p>The various activation parameters such as energy of activation (AE⁺), Arrhenius factor (A), entropy of activation (AS⁺) were calculated from the rate measurements at 30°, 35°, 40°, and 45°C. A rate law has been derived on the basis of obtained data.</p> <p>Key word: Kinetic; Ru (III); Cyclopentanone; Potassium borate; Alkaline medium</p> <p>Potassium bromate (KBrO₃) has been used to oxidize various compounds in acidic medium. (Srivastava, et. al. 2001; Srivastava, Singh; 2004; Singh, 2001; Debnath, et. al. 2004. Scant attention has been paid to the activity of KBrO₃ in the presence of catalyst (Marthey, 2002; Singh & Srivastava, 1997, 1998; 1989; Srivastava, 1994). The use of Ru (III) as non toxic and homogeneous catalyst has been reported by several workers (Singh et. al. 1987; Sharma, et. al; 1986; Wagner & Sharma, et al. 1990. Srivastava; 1994 & 1999) in acidic medium, but nearly no work has been done</p>
	Title of the Paper/Vol./No./ Page	A kinetic study of Ru(III) Catalyzed Oxidation of Cyclopentanone By Potassium Bromate in Alkaline Medium, 20(2,3), 79-87,	
	Department of the Teacher	Chemistry	
	Name of the Journal	Indian J. Agriculture Chemistry	
	Year of Publication	2007	
	ISSN	0367-8229	
Link of the recognition in UGC enlistment of the Journal			

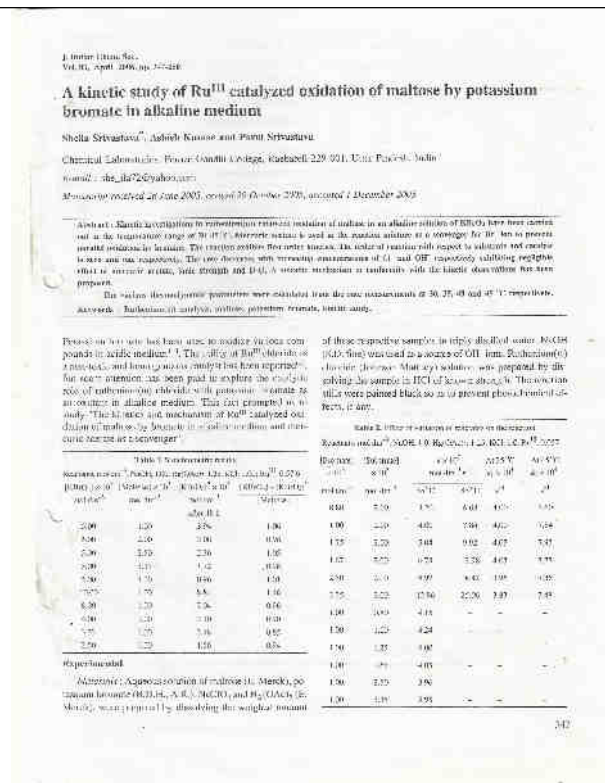
207	Name of the Author	Sheila Srivastava	<p>Indian J. agric. chem. Vol XXXX (2,3), 107-115, 2007</p> <p>Mechanistic study of Ruthenium (III) Catalyzed Oxidation of Xylose by Acidified Potassium Bromate</p> <p><i>Sheila Srivastava, Ashish Kumar and Parul Srivastava</i></p> <p>Chemical Laboratories, Feroze Gandhi College, RaeBaraili-229 001. (Received on November 20, 2006)</p> <p>Summary</p> <p>Kinetic investigation in ruthenium(III) catalyzed oxidation of xylose by an acidified solution of KBrO₃. In the presence of mercuric acetate as a scavenger for Br⁻ ion have been carried out in the temperature range 30°C to 45°C. First order kinetics in the lower KBrO₃ concentration range tended to zero order at higher concentration. The order of reaction with respect to substrate is zero but the order with respect to Ru(III) is one. Increase in [C⁻] shows negligible effect while increase in [H₃O⁺] ion, shows negative effect. Negligible effect of mercuric acetate and ionic strength of the medium was observed. D₂O have an insignificant effect on the reaction rate. A suitable mechanism in conformity with the kinetic observations have been proposed and the various activation parameters have been calculated.</p> <p><i>Key words</i> - Ru (III), Xylose, Potassium bromate, Acidic medium.</p> <p>Potassium bromate has been used to oxidize various compounds in acid medium (Srivastava and Sharma, 2006; Srivastava and Singh, 2004; Srivastava, et al. 2000; Singh et al., 2005, Ahmed & Ashraf, 2004). The utility of ruthenium (III) chloride as a toxic and homogeneous catalyst has been reported (Srivastava Khare, 2006; Srivastava, et al, 2004) but scant attention has been paid to explore catalytic role of ruthenium (III) chloride with potassium bromate as an oxidant. This fact prompted us to study "A kinetic study of Ru (III) catalyzed oxidation of xylose by bromate in perchloric acid medium and mercuric acetate as a scavenger."</p> <p>Experimental</p> <p>Materials:</p> <p>Aqueous solution of xylose (E. Merck), Potassium bromate (BDH, AR), NaClO₄ and Hg (OAc)₂ (E. Merck), were prepared by dissolving the weighed amount of samples in triply distilled water. HClO₄ (50%) of E. Merck as a source of H⁺ ions. Ruthenium (III) chloride (Johnson Matthey)</p>
	Title of the Paper/Vol./No./ Page	Mechanistic study of Ru(III) catalyzed oxidation of xylose by Acidified Potassium Bromate, 20(2,3), 107-115,.	
	Department of the Teacher	Chemistry	
	Name of the Journal	Indian J. Agriculture Chemistry	
	Year of Publication	2007	
	ISSN	0367-8229	
	Link of the recognition in UGC enlistment of the Journal		
208	Name of the Author	Sheila Srivastava	<p>Indian J. agric. chem. Vol XXXX (2,3),97-105, 2007</p> <p>Ru (III) and Ir(III) Catalyzed Oxidation of Citric Acid by N-bromosuccinimide- A comparative kinetic study</p> <p><i>Sheila Srivastava , Pooja Khare, Sarika Singh and Sangeeta Srivastava</i></p> <p>Chemical Laboratories, Feroze Gandhi College, Rae Baraili-229001</p> <p>Summary</p> <p>The kinetics and mechanism of Ru(III) and Ir(III) catalyzed oxidation of citric acid by N-bromosuccinimide (NBS) have been studied in acidic medium in presence of mercuric acetate as a scavenger in the temperature range of 30°-45° C. Ru(III) and Ir(III) catalyzed reaction follow identical kinetics.</p> <p>The rate shows zero order kinetics in [substrate] and first order with respect to oxidant [NBS], [Ru(III)] and [Ir(III)] respectively. Increase in [C⁻] showed positive effect, while negative effect of acetic acid is observed. A suitable mechanism in conformity with the observed kinetics is proposed and activation parameters calculated.</p> <p><i>Key words</i> : Ru(III), Ir (III), Citric acid, N-bromosuccinimide; Kinetic</p> <p>Kinetic investigation of oxidation of some aliphatic and aromatic hydroxyl acids with various oxidizing agents have been reported by various workers (Dave, et al. 2000; Natarajan & Venkateshaubramannian, 1975; Ganapathy, et al. 1948; Mehta, et. 1982; Elaco, 1983) compounds, Singh, et. al. 1994; Wagure, et al., 1990; Singh Chopra; 1997; MaslandV et al., 2001; Singh et al., 1988). The utility of ruthenium (III) chloride (Sharma, et al., 2003; Chintanbaram; et al. 2003; Srivastava, 1992; Konderasaha and Anand, 2002; Srivastava & Singh 2003), and Iridium (III) chloride (Rajani, et. al; 1998; Singh et al. 2000) as homogenous catalyst has been reported by several workers. So far, little attention has been paid to the activity of NBS in presence of catalyst in acidic media. This prompted us to undertake the present work which constitutes of the comparative kinetic study of Ru (III) catalyzed oxidation of citric acid by bromosuccinimide. Mechanistic steps are discussed</p> <p>Experimental</p> <p>All the chemicals used were of highest purity available. Aqueous solution of citric acid (E. Merck) was prepared by dissolving an accurately weighed amount of sample in triple- distilled water. An aqueous solution of NBS was prepared fresh each day from G.R. (Merck) sample of reagent, and its strength was checked iodometrically (Barkat, 1927) Ruthenium</p>
	Title of the Paper/Vol./No./ Page	Ru(III) and Ir(III) Catalyzed Oxidation of Citric Acid by N-bromosuccinimide – A comparative kinetic study, 20(2,3), 97-105,	
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	Name of the Journal	Indian J. Agriculture Chemistry	
	Year of Publication	2007	
	ISSN	0367-8229	
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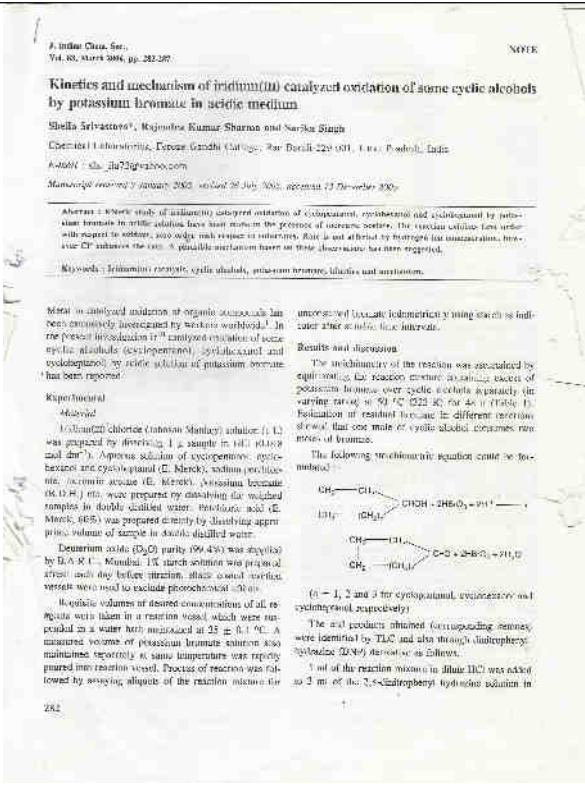
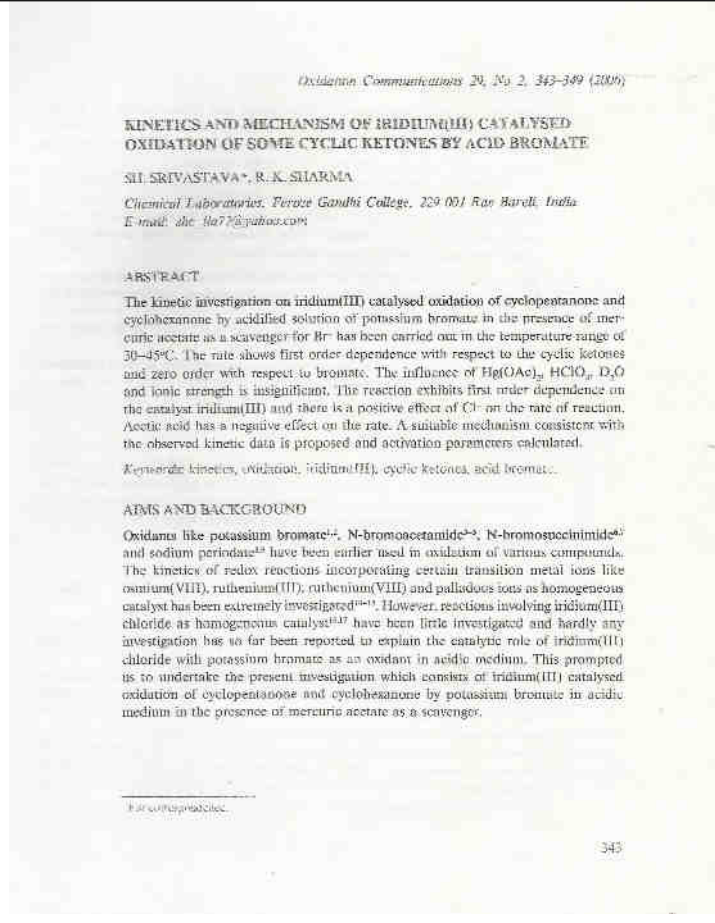
209	Name of the Author	Sheila Srivastava	
Title of the Paper/Vol./No./ Page	Ru(III) Catalysis in Oxidation of some Amino Acids by acid bromate: A kinetic study, 20(2,3), 69-78,.		
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Name of the Journal	Indian J. Agriculture Chemistry		
Year of Publication	2007		
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210	Name of the Author	Dr. Ajay Kumar Sinha	
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211	Name of the Author	Dr. Ajay Kumar Sinha
	Title of the Paper/Vol./No./ Page	Myanmar: Path to Terrorism or Window to Look East
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212	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	A kinetic study of Ru(III) catalyzed oxidation of maltose by potassium bromate in alkaline medium 83,347-350,
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	Name of the Journal	J. Indian Chem. Soc.
	Year of Publication	2006
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213	Name of the Author	Sheila Srivastava	
	Title of the Paper/Vol./No./ Page	Kinetics and mechanism of iridium(III) catalyzed oxidn of some cyclicalcohols by potassium brom ate in acidic medium 83, 282-287,	
	Department of the Teacher	Chemistry	
	Name of the Journal	J. Indian Chem. Soc.	
	Year of Publication	2006	
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214	Name of the Author	Sheila Srivastava	
	Title of the Paper/Vol./No./ Page	Kinetics and mechanism of iridium(III) catalyzed oxidatin of some cyclic ketones by acid bromate 29, 343-349,	
	Department of the Teacher	Chemistry	
	Name of the Journal	Oxidation Communications	
	Year of Publication	2006	
	ISSN	0209-4541	
	Link of the recognition in UGC enlistment of the Journal		

215	Name of the Author	Sheila Srivastava	<p style="text-align: right;"><i>Oxidation Communications</i>, 79, No. 1, 48-56 (2006)</p> <p style="text-align: center;">Ru(III) AND Ir(III) CATALYSED OXIDATION OF MALIC ACID BY N-BROMOSUCCINIMIDE: A COMPARATIVE KINETIC STUDY.</p> <p>SH. SRIVASTAVA*, P. KHARE <i>Chemical Laboratories, Ferret Gandhi College, 29-001 Raichavli, U. P., India</i> <i>E-mail: she_72@yahoo.com</i></p> <p>ABSTRACT The kinetics and mechanism of Ru(III) and Ir(III) catalysed oxidation of malic acid by N-bromosuccinimide (NBS) have been studied in acidic medium in the presence of mercuric acetate as a scavenger in the temperature range of 30–45°C. Ru(III) and Ir(III) catalysed reactions follow identical kinetics. The rate shows first order kinetics in [substrate], oxidant [NBS], [Ru(III)] and [Ir(III)], respectively. Increase in [Cl⁻] showed positive effect, while negative effect of acetic acid and succinimide was observed. Negligible effect of [H⁺], mercuric acetate, and ionic strength was observed. A suitable mechanism in conformity with the observed kinetics is proposed and activation parameters calculated. <i>Keywords:</i> oxidation kinetics; malic acid; N-bromo-succinimide; Ru(III); Ir(III) catalysis.</p> <p>AIMS AND BACKGROUND Kinetic investigation of oxidation of some aliphatic and aromatic hydroxy acids with various oxidising agents have been reported by various researchers¹⁻⁴. N-bromo-succinimide (NBS) is a mild and selective oxidant for many organic compounds^{5,6}. The utility of ruthenium(III) chloride^{7,8} and iridium(III) chloride^{9,10} as homogeneous catalyst has been reported by several researchers. So far, little attention has been paid to the activity of NBS in the presence of catalyst in acidic media. This prompted us to undertake the present work which constitutes of the comparative kinetic study of Ru(III) and Ir(III) catalysed oxidation of malic acid by N-bromo-succinimide. Mechanistic steps are discussed.</p> <p>EXPERIMENTAL All the chemicals used were of highest purity available. Aqueous solution of malic acid (E. Merck) was prepared by dissolving an accurately weighed amount of sample in triply distilled water. An aqueous solution of NBS was prepared fresh each day. *Correspondence: she_72@yahoo.com</p> <p style="text-align: center;">48</p>
	Title of the Paper/Vol./No./ Page	Ru(III) and Ir(III) catalyzed oxidation of Malic acid by N-bromosuccinimide : A comparative kinetic study, 29(1), 48-56,	
	Department of the Teacher	Chemistry	
	Name of the Journal	Oxidation Communications	
	Year of Publication	2006	
	ISSN	0209-4541	
	Link of the recognition in UGC enlistment of the Journal		
216	Name of the Author	Sheila Srivastava	<p style="text-align: right;"><i>Oxidation Communications</i>, 29, No. 3, 660-666 (2006)</p> <p style="text-align: center;">KINETIC STUDY OF RUTHENIUM(III) CATALYSED OXIDATION OF MALTOSE BY BROMATE IN ACIDIC MEDIUM</p> <p>SH. SRIVASTAVA*, A. KUMAR, P. SRIVASTAVA <i>Chemical Laboratories, Ferret Gandhi College, 29-001 Raichavli (U.P.), India</i> <i>E-mail: she_72@yahoo.com</i></p> <p>ABSTRACT Kinetic investigation in ruthenium(III) catalysed oxidation of maltose by an acidified solution of KBrO₃ in the presence of mercuric acetate as a scavenger for Br⁻ ion has been carried out in temperature range 30–45°C. First order kinetics in the lower KBrO₃ concentration range tended to zero order at higher concentration. The order of reaction with respect to substrate is zero, but the order with respect to Ru(III) is one. Increase in [Cl⁻] shows negligible effect while increase in [H⁺] shows negative effect. Negligible effect of mercuric acetate and ionic strength of the medium was observed. D₂O has an insignificant effect on the reaction rate. A suitable mechanism in conformity with the kinetic observations has been proposed and the various activation parameters have been calculated. <i>Keywords:</i> oxidation; maltose; ruthenium(III) catalyst; bromate; acidic medium.</p> <p>AIMS AND BACKGROUND Potassium bromate has been used to oxidise various compounds in acidic medium^{1,2}. The utility of ruthenium(III) chloride as a non toxic and homogeneous catalyst has been reported^{3,4} but scant attention has been paid to explore catalytic role of ruthenium(III) chloride with potassium bromate as an oxidant. This fact prompted us to study the kinetics and mechanism of Ru(III) catalysed oxidation of maltose by bromate in perchloric acid medium.</p> <p>EXPERIMENTAL <i>Materials.</i> Aqueous solutions of maltose (E. Merck), potassium bromate (BDH, AR), NaClO₄ and Hg(OAc)₂ (E. Merck) were prepared by dissolving the weighed amount of sample in triply distilled water. HClO₄ (68%) of E. Merck was used as a source of F⁻ ions. Ruthenium(III) chloride (Johnson Matthey) was prepared by dissolving</p> <p>*Correspondence: she_72@yahoo.com</p> <p style="text-align: center;">660</p>
	Title of the Paper/Vol./No./ Page	Kinetic study of Ruthenium(III) catalyzed oxidation of maltose by brom ate in acidic medium , 29(3), 660-666,	
	Department of the Teacher	Chemistry	
	Name of the Journal	Oxidation Communications	
	Year of Publication	2006	
	ISSN	0209-4541	
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217	Name of the Author	Sheila Srivastava	<p style="text-align: right;"><i>Oxidation Communications 29, No 3, 708-714 (2006)</i></p> <p>MECHANISTIC STUDY OF RUTHENIUM(III) CATALYZED OXIDATION OF LEUCINE BY ALKALINE N-BROMOACETAMIDE</p> <p>SH. SRIVASTAVA*, SH. SINGH</p> <p><i>Chemical Laboratories, Feroze Gandhi College, 229 001 Rae Bareilly, U.P., India</i> E-mail: she_sir72@yahoo.com</p> <p>ABSTRACT</p> <p>The kinetics of ruthenium(III) catalysed oxidation of leucine by N-bromoacetamide (NBA) in basic medium in the presence of mercuric acetate as a scavenger for any bromide ion formed in the reaction has been carried out in the temperature range 30–45°C. First order kinetics is observed in the case of oxidant NBA, catalyst ruthenium trichloride. The reaction follows first order kinetics in leucine. Increase in $[Cl^-]$ showed a negative effect, while $[OH^-]$ showed a positive effect. Successive addition of acetamide exhibited negative effect on the reaction rate. An intermediate complex is formed between the reactive species of NBA and the catalyst ruthenium(III) chloride in the slow and rate-determining step. Insignificant effect of mercuric acetate depicts its role as a scavenger for any bromide ion formed in the reaction and, thus, eliminates the possibility of its involvement either as a catalyst or parallel oxidation by free bromine. Negligible effect of ionic strength has been observed. OBr^- and $[RuCl_2(H_2O)_2]^{2+}$ have been proposed as the real reactive species of NBA and ruthenium(III) chloride, respectively. Various activation parameters have been computed. A suitable mechanism in agreement with the kinetic observations has been proposed.</p> <p><i>Keywords:</i> oxidation, ruthenium(III) catalyst, leucine, alkaline N-bromoacetamide.</p> <p>AIMS AND BACKGROUND</p> <p>$KBrO_3$ and $NaIO_3$ have been used as oxidants for cyclic alcohols¹ and glycerol². Work has also been done on kinetics and mechanism of uncatalysed oxidation of ketones^{3,4} and primary alcohols⁵ by NBA. The utility of ruthenium(III) chloride as a non-toxic and homogeneous catalyst has been reported by several researchers⁶⁻⁸. Recently NBA has been used as oxidant for some reducing sugars⁹ in catalysed reaction. Scant attention has been paid to explore the catalytic role of ruthenium(III) chloride with NBA as oxidant¹⁰⁻¹² and nearly no work is done in alkaline medium.</p> <p>* For correspondence.</p> <p>708</p>
	Title of the Paper/Vol./No./ Page	Mechanistic study of Ruthenium(III) catalyzed oxidation of leucine by alkaline N-bromoacetamide, 29(3), 708-714,	
	Department of the Teacher	Chemistry	
	Name of the Journal	Oxidation Communications	
	Year of Publication	2006	
	ISSN	0209-4541	
	Link of the recognition in UGC enlistment of the Journal		
218	Name of the Author	Sheila Srivastava	<p style="text-align: right;"><i>Oxidation Communications 29, No 3, 622-627 (2006)</i></p> <p>ALKALINE BROMATE OXIDATION OF CYCLOHEXANOL IN THE PRESENCE OF Ru(III) AS CATALYST. A KINETIC STUDY</p> <p>SH. SRIVASTAVA*, P. SRIVASTAVA, A. KUMAR</p> <p><i>Chemical Laboratories, Feroze Gandhi College, 229 001 Rae Bareilly, U.P., India</i> E-mail: she_sir72@yahoo.com</p> <p>ABSTRACT</p> <p>Kinetic investigation on ruthenium(III) catalysed oxidation of cyclohexanol by an alkaline solution of potassium bromate in the presence of mercuric acetate as a scavenger for Br^- ion has been made in the temperature range of 30–45°C. The rate shows first order kinetics in $[BrO_3^-]$ and $[Ru(III)]$ while the order of reaction with respect to substrate is zero. Increase in $[Cl^-]$ showed positive effect while increase in $[OH^-]$ showed negative effect. Negligible effect of mercuric acetate and ionic strength of the medium was observed. The effect of varying percentage of $AcOH$ in the reaction mix was also examined. The reactive species of $Ru(III)$ in alkaline medium is $[RuCl_2(H_2O)_2]^{2+}$ under the experimental pH range. A suitable mechanism in conformity with the kinetic observations has been proposed. Various activation parameters were calculated from rate measurements, and the rate law is derived on the basis of the obtained data.</p> <p><i>Keywords:</i> bromate, catalysis, oxidation, ruthenium(III), alkaline medium.</p> <p>AIMS AND BACKGROUND</p> <p>Potassium bromate has been earlier used to oxidize various compounds in acidic medium¹⁻³. Scant attention has been paid to the activity of $KBrO_3$ in the presence of catalyst⁴. The use of $Ru(III)$ as non-toxic and homogeneous catalyst has been reported by several researchers⁵⁻¹¹ in acidic medium, but nearly no work has been done to reveal the mode of catalysed reaction in alkaline medium. This prompted us to undertake the present investigation, which consists of alkaline bromate oxidation of cyclohexanol in the presence of ruthenium(III) as catalyst and mercuric acetate as a scavenger.</p> <p>* For correspondence.</p> <p>622</p>
	Title of the Paper/Vol./No./ Page	Alkaline bromate oxidn of cyclohexanol in the presence of Ru(III) as catalyst – A kinetic study, 29(3),622-627,	
	Department of the Teacher	Chemistry	
	Name of the Journal	Oxidation Communications	
	Year of Publication	2006	
	ISSN	0209-4541	
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219	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Kinetic study of iridium(III) catalyzed oxidation of D-mannitol and erythritol by N-bromosuccinimide in acidic medium, 83, 1103-1106
	Department of the Teacher	Chemistry
	Name of the Journal	J. Indian Chem. Soc.
	Year of Publication	2006
	ISSN	0019-4522
	Link of the recognition in UGC enlistment of the Journal	
220	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Ru(III) catalyzed oxidation of cyclopentanol and cyclohexanol by N-bromoacetamide, 37(5), 275-281,
	Department of the Teacher	Chemistry
	Name of the Journal	International Journal of Chemical Kinetics
	Year of Publication	2005
	ISSN	1097-4601
	Link of the recognition in UGC enlistment of the Journal	

J. Indian Chem. Soc.,
Vol. 83, November 2006, pp. 1103-1106

Kinetic study of iridium(III) catalyzed oxidation of D-mannitol and erythritol by N-bromosuccinimide in acidic medium

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Manuscript received 8 June 2006, revised 29 August 2006, accepted 30 August 2006

Abstract : Kinetic investigations on iridium trichloride catalyzed oxidation of D-mannitol and erythritol by acidic solution of N-bromosuccinimide (NBS) in the presence of mercuric acetate as a scavenger for Br⁻ have been carried out in the temperature range 28–45 °C. The reactions follow identical kinetics. The rate shows a first-order dependence on [NBS] in lower concentration range which tends to zero-order at its higher concentrations. A first-order dependence on [Ir^{III}] is also observed. Negligible effect of [substrate], [Hg(OAc)₂] and ionic strength have been observed. Addition of [H⁺], [Cl⁻] and succinimide shows a negative effect. Activation parameters have been computed and a suitable mechanism conforming to above results has been proposed.

Keywords : Iridium(III), N-bromosuccinimide, D-mannitol.

N-Bromosuccinimide (NBS) is a potent oxidant and has been used in the quantitative determination¹. The utility of iridium(III) chloride² as homogeneous catalyst has been reported by several workers but little attention has been paid so far to activity of iridium(III) chloride as catalyst in NBS oxidation. This fact prompted us to undertake the present investigation which constitutes the kinetic study of Ir(III) catalyzed oxidation of D-mannitol and erythritol by acidic NBS in the presence of Hg(OAc)₂ as a scavenger for Br⁻.

Experimental
All the chemicals used in this experiment were of AnalaR quality. The reactions were initiated (in a thermostat ±0.1 °C) by addition of NBS solution and other reagents equilibrated separately at 35 °C. The progress of the reaction was monitored by determining unreacted NBS iodometrically at regular intervals, using starch as indicator.

Stoichiometry and product analysis : Stoichiometry of the reaction was ascertained by equilibrating the reaction mixture containing an excess of NBS over D-mannitol and erythritol (in varying ratios) at 30 °C for 48 h and determination of residual NBS in different sets showed that one mol of glycol consumed two mol of NBS. The oxidation product D-mannonic acid and erythrionic acid were detected by conventional methods.

Results and discussion
The kinetic results are given in Table 1. First-order dependence in NBS was followed at lower NBS concentration which tended to zero-order at higher concentrations which is clear from the plot of *k* versus NBS (Fig. 1). The reaction was observed to be independent of [substrate] i.e. zero-order with respect to both D-mannitol

Fig. 1. Plot of *k* and [NBS] in oxidation of D-mannitol (A) and erythritol (C): [Ir^{III}] = 6.70 × 10⁻³ M, [Hg(OAc)₂] = 1.00 × 10⁻² M, [KCl] = 1.00 × 10⁻³ M, [substrate] = 2.00 × 10⁻² M, [Hg(OAc)₂] = 1.25 × 10⁻³ M, temp. 35 °C.

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Ruthenium(III)-Catalyzed Oxidation of Cyclopentanol and Cyclohexanol by N-Bromoacetamide

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Received 19 December 2005; accepted 5 November 2006
DOI 10.1002/ijck.20076
Published online in Wiley InterScience (www.interscience.wiley.com).

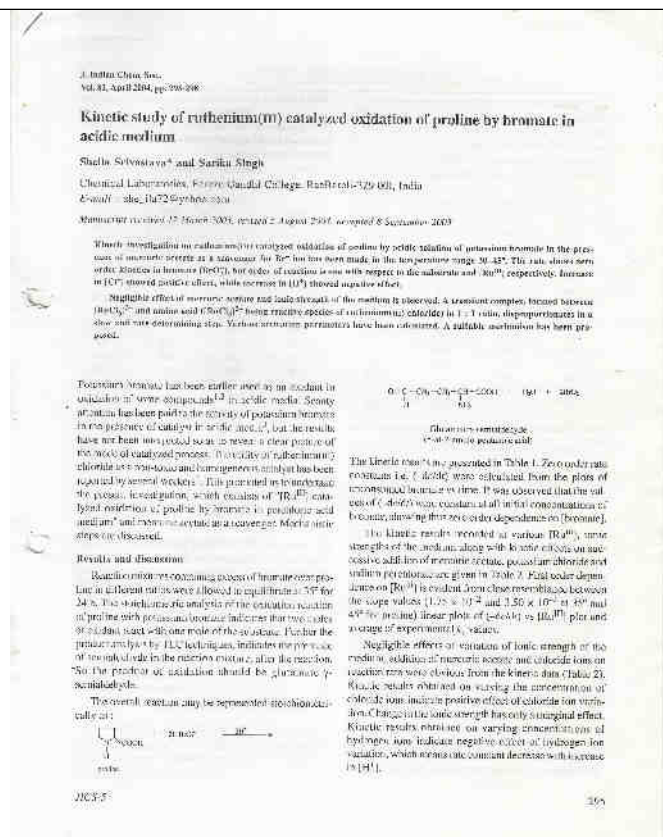
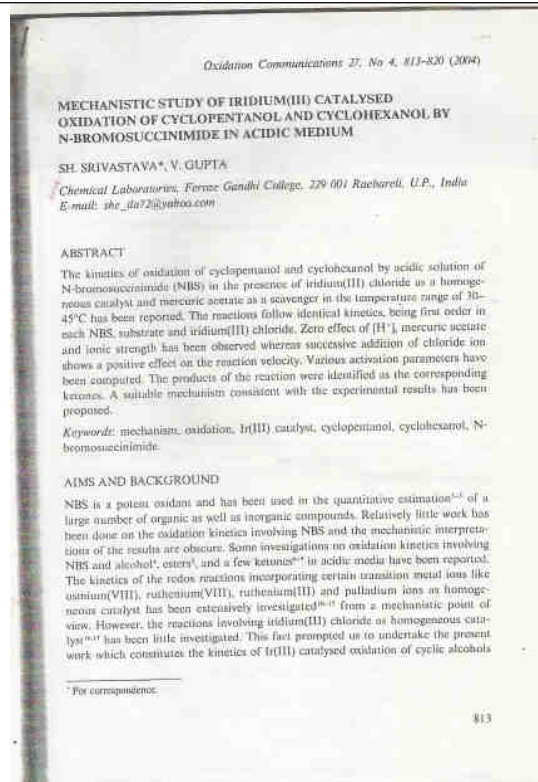
ABSTRACT Kinetic investigations on Ru(III)-catalyzed oxidation of cyclopentanol and cyclohexanol by acidic solution of N-bromoacetamide (NBA) in the presence of mercuric acetate as a scavenger have been carried out in the temperature range of 30–50 °C. Similar kinetics was followed by both the cyclic alcohols. First-order kinetics in the lower concentration range of NBA was observed to tend to zero order at its higher concentrations. The reaction exhibits a zero-order rate dependence with respect to each cyclic alcohol, while it is first order in Ru^{III}. Increase in [H⁺] and [Cl⁻] showed negative effect. While successive addition of acetamide exhibited negative effect on the reaction rate. Independent effect of sodium perchlorate, D₂O, and mercury(II) acetate on the reaction velocity was observed. Cationic bromine has been proposed as the real oxidizing species. Various thermodynamic parameters have been computed. A suitable mechanism in agreement with the kinetic observations has been proposed. © 2005 Wiley Periodicals, Inc. *J. Chem. Kinetics* 37: 275–281, 2005

INTRODUCTION
KBrO₃ and NaIO₄ have been used as oxidants for glycerol [1] and cyclic alcohols [2]. Several papers have recently been devoted to the kinetics and mechanism of uncatalyzed oxidation of primary alcohols [3], dimethyl sulfoxide [4], and some ketones [5,6] by N-bromosuccinimide (NBS) which was earlier used as a halogenating and oxidizing agent in the oxidation of several compounds [7]. Recently NBA has been used as oxidant for some reducing sugars [8]. The utility of ruthenium(III) chloride as a nonionic and homogeneous catalyst has been reported by several workers [9–11]. Scant attention has been paid to explore the catalytic role of ruthenium(III) chloride with NBA as oxidant [12]. This prompted us to undertake the present work which constitutes the kinetics of Ru^{III}-catalyzed oxidation of some cyclic alcohols by NBA in the presence of perchloric acid and mercury(II) acetate as scavenger. Mechanistic steps are discussed.

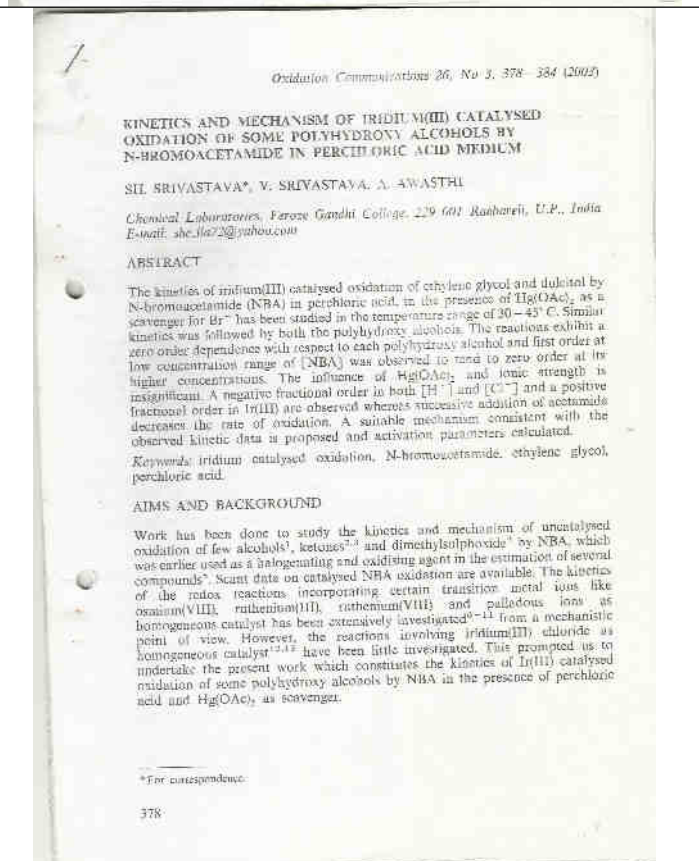
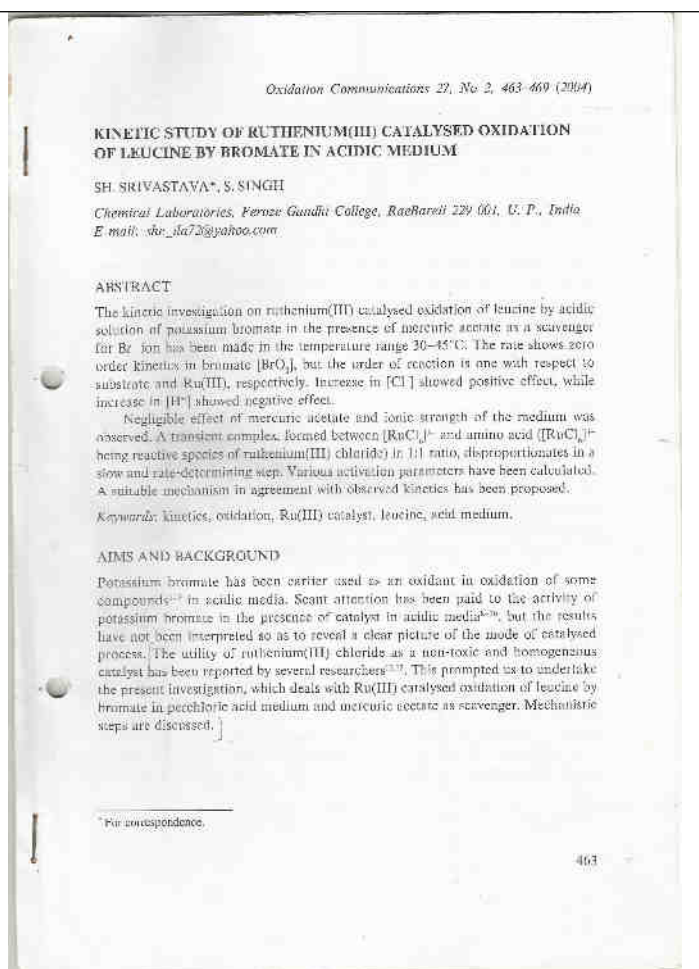
EXPERIMENTAL
Materials
Aqueous solutions of cyclopentanol and cyclohexanol were prepared by weighing (or sample (AnalaR grade) and dissolving it in doubly distilled water. NBA aqueous solution was prepared fresh each day from a G.R., S. Block sample of the reagent and its

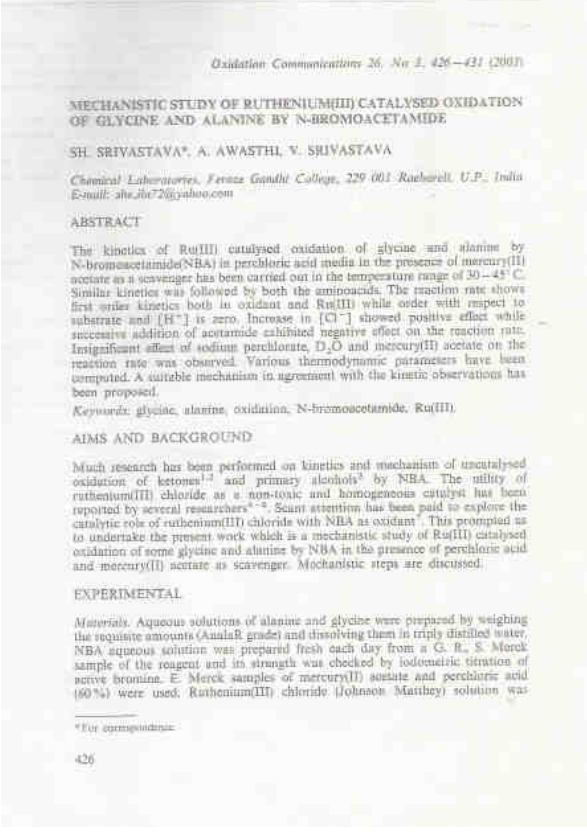
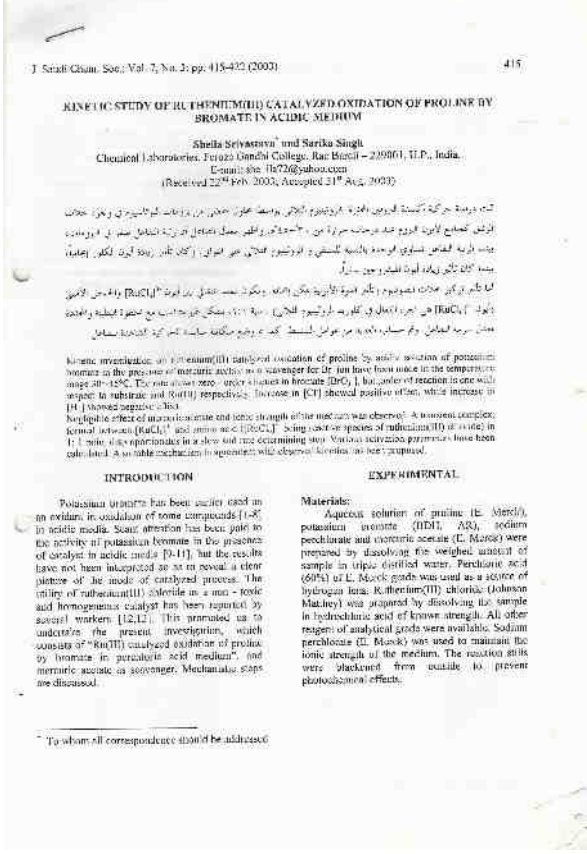
Correspondence to: Sheila Srivastava, e-mail: she_lla77@yahoo.com
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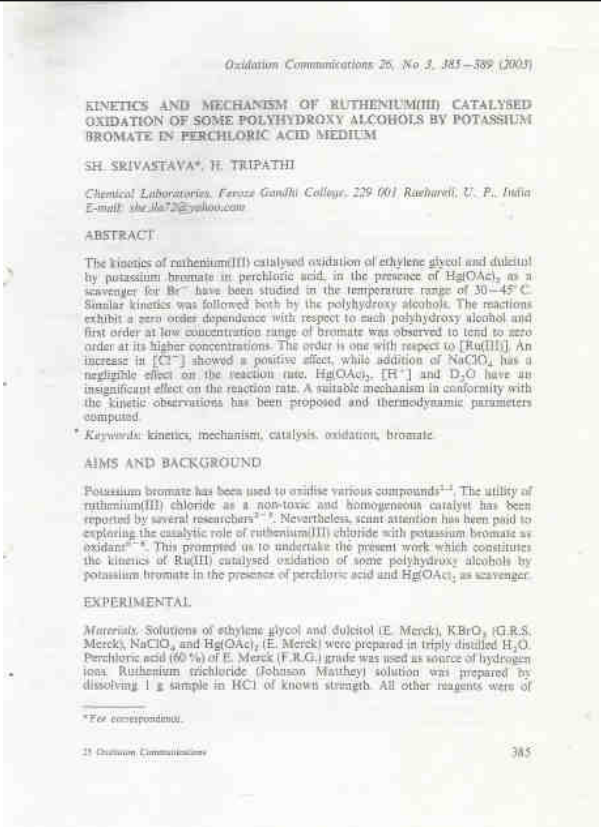
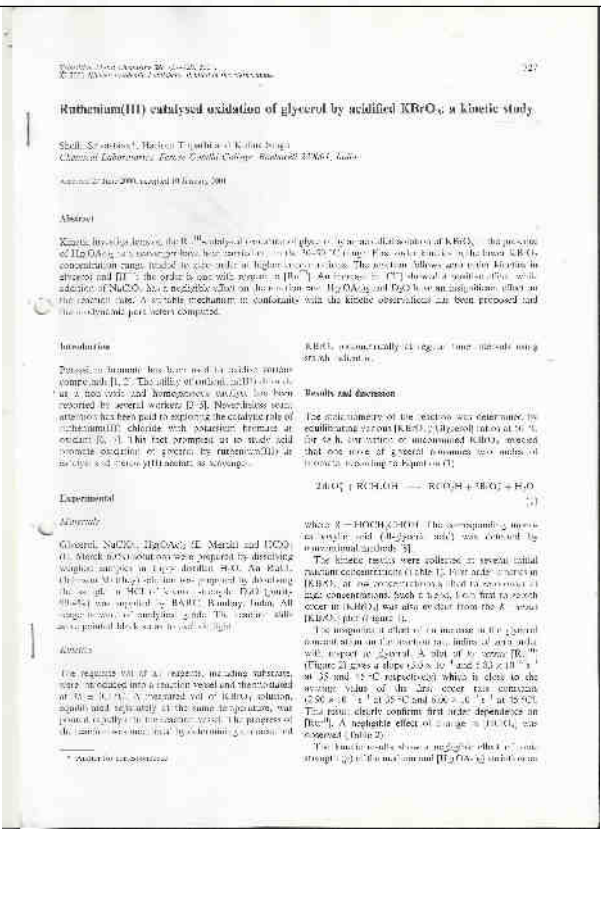
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	Department of the Teacher	Chemistry
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	Year of Publication	2004
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222	Name of the Author	Sheila Srivastava
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	Department of the Teacher	Chemistry
	Name of the Journal	J. Indian Chem. Soc.
	Year of Publication	2004
	ISSN	0019-4522
	Link of the recognition in UGC enlistment of the Journal	




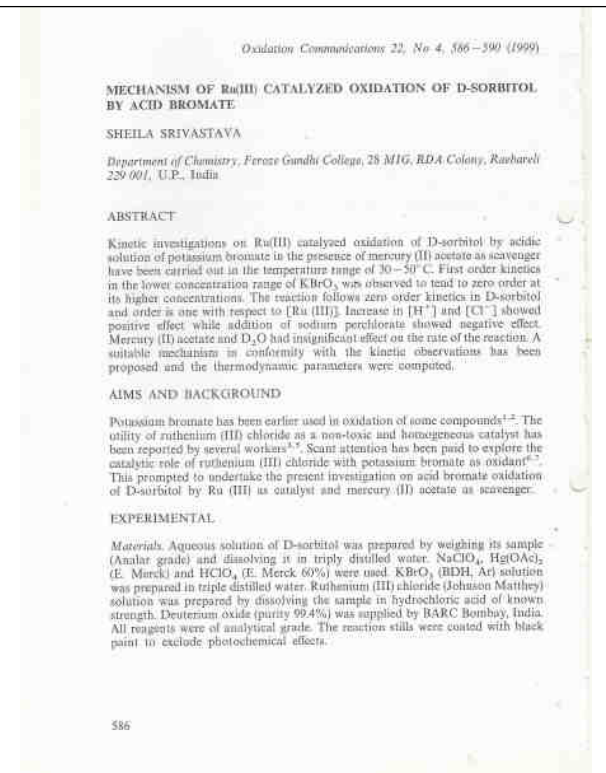
223	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Kinetic study of Ruthenium(III) catalyzed oxidatin of leucine by bromate in acidic medium, 27(2), 463-469,
	Department of the Teacher	Chemistry
	Name of the Journal	Oxid. Commun.
	Year of Publication	2004
	ISSN	0209-4541
	Link of the recognition in UGC enlistment of the Journal	
224	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Kinetics and mechanism Ir(III) catalyzed oxidatin of some polyhydroxy alcohols by Nbromo acetamide by in perchloric acid med. 26(3), 378-384,
	Department of the Teacher	Chemistry
	Name of the Journal	Oxid. Commun.
	Year of Publication	2003
	ISSN	0209-4541
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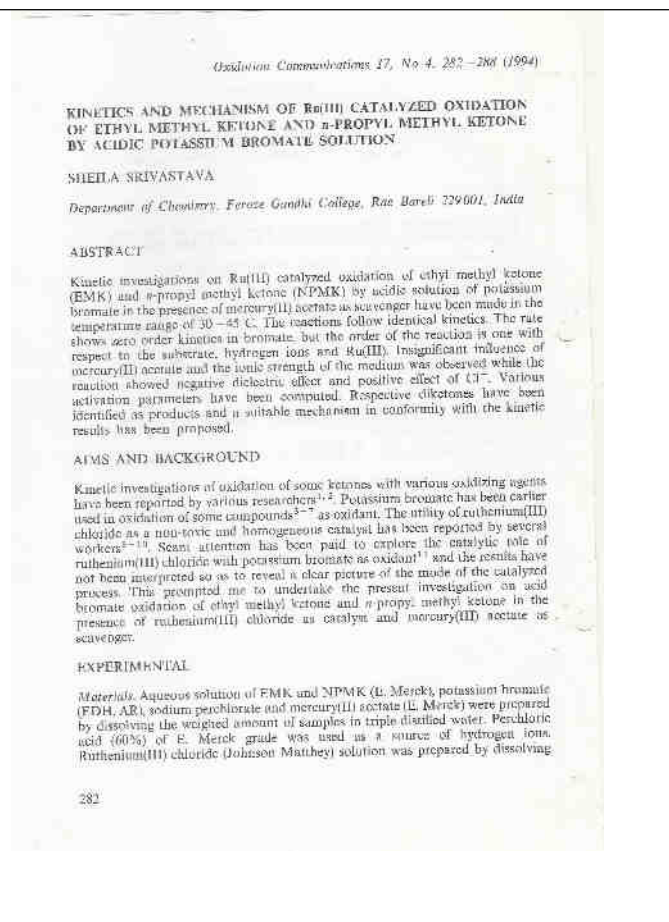
225	Name of the Author	Sheila Srivastava	
Title of the Paper/Vol./No./ Page	Mechanistic study of Ru(III) catalyzed oxidation of glycine and alanine by N-bromoacetamide, 26(3) 426-431,		
Department of the Teacher	Chemistry		
Name of the Journal	Oxid. Commun.		
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226	Name of the Author	Sheila Srivastava	
Title of the Paper/Vol./No./ Page	Kinetic study of Ruthenium(III) catalyzed oxidn of Proline by bromate in acidic medium, 7(3), 415-422.,		
Department of the Teacher	Chemistry		
Name of the Journal	J. Saudi Chem. Soc.		
Year of Publication	2003		
ISSN	1319-6103		
Link of the recognition in UGC enlistment of the Journal			

227	Name of the Author	Sheila Srivastava	 <p style="text-align: center;">Oxidation Communications 26, No 3, 385-389 (2003)</p> <p style="text-align: center;">KINETICS AND MECHANISM OF RUTHENIUM(III) CATALYSED OXIDATION OF SOME POLYHYDROXY ALCOHOLS BY POTASSIUM BROMATE IN PERCHLORIC ACID MEDIUM</p> <p style="text-align: center;">SH. SRIVASTAVA*, H. TRIPATHI</p> <p style="text-align: center;">Chemical Laboratories, Farook Gandhi College, 229 001, Raebareilly, U. P., India E-mail: she_8672@yahoo.com</p> <p>ABSTRACT:</p> <p>The kinetics of ruthenium(III) catalysed oxidation of ethylene glycol and dulcitol by potassium bromate in perchloric acid, in the presence of Hg(OAc)₂ as a scavenger for Br⁻ have been studied in the temperature range of 30-45°C. Similar kinetics was followed both by the polyhydroxy alcohols. The reactions exhibit a zero order dependence with respect to each polyhydroxy alcohol and first order at low concentration range of bromate was observed to tend to zero order at its higher concentrations. The order is one with respect to [Ru(III)]. An increase in [Cl⁻] showed a positive effect, while addition of NaClO₄ has a negligible effect on the reaction rate. Hg(OAc)₂, [H⁺] and D₂O have an insignificant effect on the reaction rate. A suitable mechanism in conformity with the kinetic observations has been proposed and thermodynamic parameters computed.</p> <p>* Keywords: kinetics, mechanism, catalysis, oxidation, bromate.</p> <p>AIMS AND BACKGROUND</p> <p>Potassium bromate has been used to oxidise various compounds¹⁻³. The utility of ruthenium(III) chloride as a non-toxic and homogeneous catalyst has been reported by several researchers⁴⁻⁷. Nevertheless, scant attention has been paid to exploring the catalytic role of ruthenium(III) chloride with potassium bromate as oxidant⁸⁻⁹. This prompted us to undertake the present work which constitutes the kinetics of Ru(III) catalysed oxidation of some polyhydroxy alcohols by potassium bromate in the presence of perchloric acid and Hg(OAc)₂ as scavenger.</p> <p>EXPERIMENTAL</p> <p>Materials: Solutions of ethylene glycol and dulcitol (E. Merck), KBrO₃ (G.R.S. Merck), NaClO₄ and Hg(OAc)₂ (E. Merck) were prepared in triply distilled H₂O. Perchloric acid (60%) of E. Merck (P.R.G.) grade was used as source of hydrogen ions. Ruthenium trichloride (Johnson Matthey) solution was prepared by dissolving 1 g sample in HCl of known strength. All other reagents were of</p> <p style="text-align: center;">*For correspondence.</p> <p style="text-align: center;">28 Oxidation Communications 385</p>
228	Name of the Author	Sheila Srivastava	 <p style="text-align: center;">Oxidation Communications 26, No 6, 727-729 (2001)</p> <p style="text-align: center;">Ruthenium(III) catalysed oxidation of glycerol by acidified KBrO₃: a kinetic study</p> <p style="text-align: center;">Sheila Srivastava*, H. Tripathi (E-mail: she_8672@yahoo.com)</p> <p style="text-align: center;">Chemical Laboratories, Farook Gandhi College, Raebareilly 229001, India</p> <p style="text-align: center;">Received 20th August 2001, accepted 19 October 2001</p> <p>Abstract</p> <p>Kinetic study of the Ru(III) catalysed oxidation of glycerol by acidified KBrO₃ in the presence of Hg(OAc)₂ as a scavenger has been reported in the temperature range of 30-45°C. The reaction follows zero order kinetics in glycerol and first order in bromate. The order is one with respect to [Ru(III)]. An increase in [Cl⁻] showed a positive effect, while addition of NaClO₄ has a negligible effect on the reaction rate. Hg(OAc)₂ and D₂O have an insignificant effect on the reaction rate. A suitable mechanism in conformity with the kinetic observations has been proposed and thermodynamic parameters computed.</p> <p>Introduction</p> <p>Ru(III) is a powerful oxidant in acidic medium. Potassium bromate has been used to oxidise various compounds¹⁻³. The utility of ruthenium(III) chloride as a non-toxic and homogeneous catalyst has been reported by several workers⁴⁻⁷. Nevertheless, scant attention has been paid to exploring the catalytic role of ruthenium(III) chloride with potassium bromate as oxidant⁸⁻⁹. This prompted us to undertake the present work which constitutes the kinetics of Ru(III) catalysed oxidation of glycerol by acidified KBrO₃ in the presence of Hg(OAc)₂ as scavenger.</p> <p>Results and discussion</p> <p>The mechanism of the reaction was determined by equilibrium constant (K_{eq})¹⁰ (K_{eq} = 10¹⁰ at 30°C, 10¹¹ at 35°C, 10¹² at 40°C, 10¹³ at 45°C) and uncoupled follow, showed that one mole of a general bromate ion oxidises two moles of glycerol according to equation (1).</p> $2\text{HCO} + \text{RCH}_2\text{OH} \rightarrow \text{RCOH} + \text{RCHO} + \text{H}_2\text{O} \quad (1)$ <p>Experiment</p> <p>Materials: Glycerol, NaClO₄, Hg(OAc)₂ (E. Merck) and DCO₂ (G.R.S. Merck) solutions were prepared by distilling through sulphuric acid in a glass distillation flask. An 80% solution of HCl was prepared by diluting the weight of HCl with water. Triply distilled H₂O was used for all solutions. Ru(III) solution was prepared by dissolving 1 g sample in HCl of known strength. All other reagents were of analytical grade.</p> <p>Procedure: The reaction mixture was prepared in a flask and the reaction was carried out in a thermostated bath. The reaction mixture was analysed at regular intervals. The progress of the reaction was monitored by measuring the amount of bromate ion remaining in the reaction mixture.</p> <p style="text-align: center;">* Author for correspondence.</p>

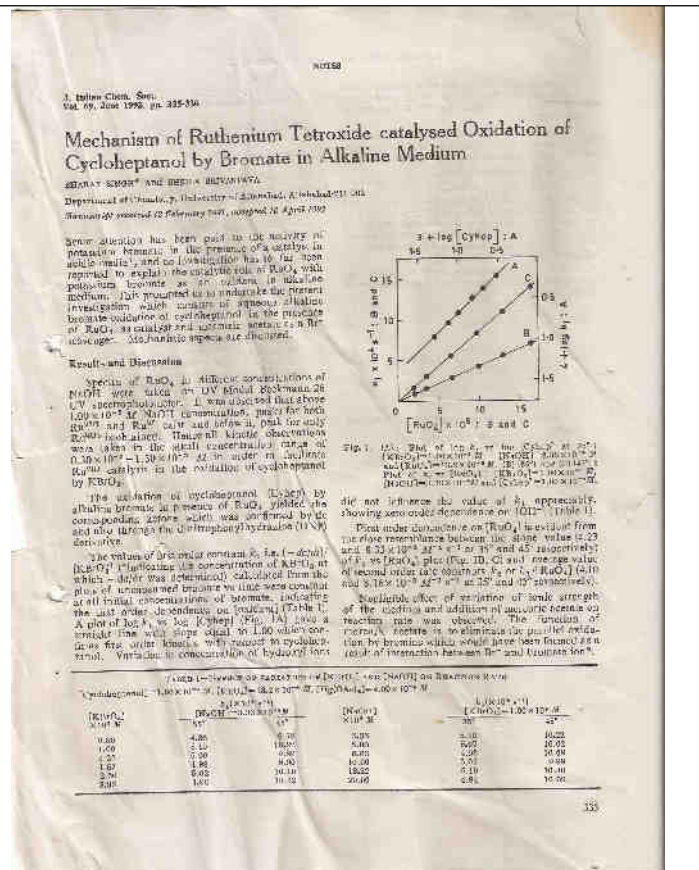
229	Name of the Author	Sheila Srivastava	<p style="text-align: center;">Oxidation Communications 23, No. 3, 388-392 (2003)</p> <p style="text-align: center;">MECHANISM OF Ru(III) CATALYSED OXIDATION OF PROPANONE AND BUTANONE BY PERIODATE</p> <p style="text-align: center;">K. SINGH, H. URBAPATHI, A. AWASTHI, SH. SRIVASTAVA*</p> <p style="text-align: center;">Chemical Laboratories, Feroze Gandhi College, 229 091, Rae Bareilly, U.P., India E-mail: shg_0472@yahoo.com</p> <p>ABSTRACT</p> <p>The kinetics of Ru(III) catalysed oxidation of propanone and butanone by sodium periodate in hydrochloric acid has been studied in the temperature range 30-50°C. The reaction is carried out in the presence of mercury (II) acetate which acts as a scavenger for H⁺. First order kinetics is observed with respect to the oxidant, i.e. sodium periodate and Ru(III) for both propanone and butanone.</p> <p>Keywords: kinetics, Ru(III), oxidation, periodate, ketones.</p> <p>AIMS AND BACKGROUND</p> <p>N-bromosuccinimide^{1,2}, N-bromosuccinimide^{3,4} and potassium bromate^{5,6} etc. have been earlier used in oxidation of various compounds. The utility of ruthenium (III) chloride⁷ as a non-toxic and homogeneous catalyst has been reported by several researchers. Scant attention has been paid to sodium periodate⁸⁻¹¹ as an oxidant and no work has been reported on Ru(III) catalysed oxidation by sodium periodate in acidic medium. This prompted us to undertake the present investigation on Ru(III) catalysed oxidation of propanone and butanone by periodate in acidic medium.</p> <p>EXPERIMENTAL</p> <p>Materials: Aqueous solution of propanone and butanone was prepared by weighing its sample (Analytical grade) and dissolving it in triply distilled water. NaClO₄, Hg(OAc)₂ (E. Merck), (E. Merck), (95%) were used as such. Sodium periodate (BDH, Ar) solution was prepared in triply distilled water. Ruthenium(III) chloride (Johnson Matthey) solution was prepared by dissolving the sample in hydrochloric acid of known strength. Deuterium oxide (purity 99.4%) was supplied by BARC, Bombay, India. All reagents were of analytical grade. The reaction vials were coated with black paint to exclude photochemical effects.</p> <p>Kinetics: A thermostated water bath was maintained at desired temperature within ±0.1°C. Required volume of all reagents including substrate was</p> <p style="text-align: right;">*For correspondence</p> <p style="text-align: center;">388</p>
	Title of the Paper/Vol./No./ Page	Mechanism of Ru(III) catalysed oxidn of propanone and butanone by periodate, 24(3), 388-392,	
	Department of the Teacher	Chemistry	
	Name of the Journal	Oxid. Commun.	
	Year of Publication	2003	
	ISSN	0209-4541	
	Link of the recognition in UGC enlistment of the Journal		
230	Name of the Author	Sheila Srivastava	<p style="text-align: center;">Oxidation Communications 24, No. 4, 558-562 (2004)</p> <p style="text-align: center;">RUTHENIUM(III) CATALYSED OXIDATION OF CYCLOHEXANOL BY ACIDIC NaIO₄</p> <p style="text-align: center;">SIL SRIVASTAVA*, K. SINGH, M. SHUKLA, N. PANDEY</p> <p style="text-align: center;">Chemical Laboratories, Feroze Gandhi College, 229 001, Rae-Bareilly, India</p> <p>ABSTRACT</p> <p>The kinetic investigations on Ru(III) catalysed oxidation of cyclohexanol by acidic solution of sodium periodate in the presence of mercury(II) acetate as a scavenger have been made in the temperature range of 30-50°C. The rate shows first order kinetics both in iodate and Ru(III) while order of the reaction is zero with respect to substrate and hydrogen ions. Insignificant influence of mercury(II) acetate and ionic strength of the medium was observed while the reaction showed positive effect of [Cl⁻] on the reaction rate. A suitable mechanism in conformity with the kinetic observations has been proposed and the thermodynamic parameters computed.</p> <p>Keywords: oxidation, cyclohexanol, Ru(III), acidic sodium periodate.</p> <p>AIMS AND BACKGROUND</p> <p>Oxidants like potassium bromate^{1,2}, N-bromosuccinimide^{3,4} and N-bromosuccinimide^{5,7} have been earlier used in oxidation of various compounds. A scant attention has been paid to sodium periodate⁸⁻¹¹ as an oxidant. Ruthenium(III) chloride¹¹ has been used as a non-toxic and homogeneous catalyst by several researchers but no work is reported on Ru(III) catalysed oxidation by sodium periodate and the results have not been interpreted to reveal a clear picture of the mode of catalysed processes. This prompted us to undertake the present investigation which consists of Ru(III) catalysed oxidation of cyclohexanol by periodate in acidic medium in the presence of mercury(II) acetate as a scavenger.</p> <p>EXPERIMENTAL</p> <p>Materials: Aqueous solution of cyclohexanol (E. Merck), sodium periodate (BDH, Ar), sodium perchlorate and mercury(II) acetate (E. Merck) were prepared by dissolving the weighed amount of samples in triply distilled water. Perchloric acid (E. Merck, 60%) was used as a source of hydrogen ions. Ruthenium(III) chloride (Johnson Matthey) solution was prepared by dissolving the sample in hydrochloric acid of known strength. Deuterium oxide (purity 99.4%) was supplied by BARC, Bombay, India. All other reagents were of highest quality available.</p> <p style="text-align: right;">*For correspondence</p> <p style="text-align: center;">558</p>
	Title of the Paper/Vol./No./ Page	Ruthenium(III) catalysed oxidation of cyclohexanol by acidic NaIO₄, 24(4), 558-562,.	
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232	Name of the Author	Sheila Srivastava	
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	Department of the Teacher	Chemistry	
	Name of the Journal	Oxid. Commun.	
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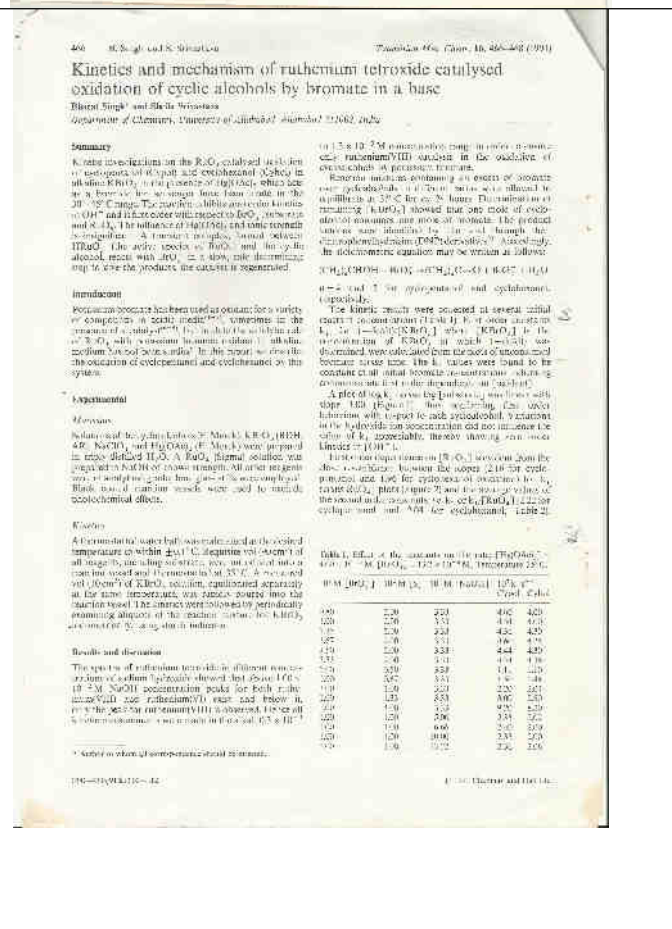
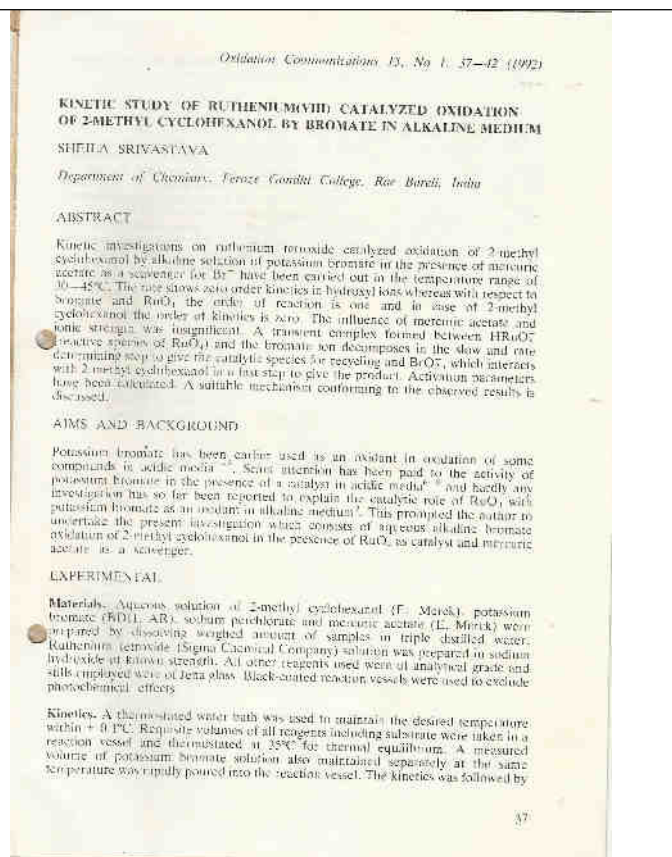
233	Name of the Author	Sheila Srivastava
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234	Name of the Author	Sheila Srivastava
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	ISSN	0019-4522
	Link of the recognition in UGC enlistment of the Journal	



235	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Kinetic study of Ruthenium(VIII) Catalysed Oxidn of 2Methylcyclohexanol by Bromate in Alkali Medium, 15(1),37-42,
	Department of the Teacher	Chemistry
	Name of the Journal	Oxid. Commun.
	Year of Publication	1992
	ISSN	0209-4541
	Link of the recognition in UGC enlistment of the Journal	
236	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Kinetics & mechanism of ruthenium tetroxide catalysed oxidation of cyclic alcohols by bromate in a base,16(4), 466-468
	Department of the Teacher	Chemistry
	Name of the Journal	Transition Metal Chemistry
	Year of Publication	1991
	ISSN	0340-4285
	Link of the recognition in UGC enlistment of the Journal	



237	Name of the Author	Sheila Srivastava	<p>React. Kinet. Catal. Lett., Vol. 39, No. 2, 243-248 (1989)</p> <p>MECHANISM OF Ru(III) CATALYSIS IN ACID BROMATE OXIDATION OF 2-METHYLCYCLOHEXANOL Bharat Singh* and Sheila Srivastava Department of Chemistry, University of Allahabad, Allahabad-2, India</p> <p>Received June 15, 1988 Accepted November 12, 1988</p> <p>Kinetic investigations on Ru(III) catalyzed oxidation of 2-methylcyclohexanol by acidic solution of potassium bromate as scavenger for bromide ions. A transient complex, formed between Ru(III) species and 2-methylcyclohexanol in 1:1 ratio, disproportionates in a slow and rate-controlling step to give the corresponding ketone and ruthenium(III) hydride, which, on interaction with acid bromate in a fast step regenerates catalytic species of Ru(III) for the recycling.</p> <p>Кинетические исследования окисления 2-метилциклогексанола броматом калия в кислой среде, катализированное Ru(III) в присутствии ацетата ртути - дивалентная бромидная соль. Дивалентный комплекс, образовавшийся между Ru(III) и 2-метилциклогексанолом с соотношением 1:1, медленно disproportionируется (замедление), образуя соответствующий кетон и гидрид рутения(III). Последний быстро взаимодействует с кислым броматом, восстанавливая катализатор Ru(III) для рециклирования.</p> <p>Author for correspondence Akujóházi Károly, Budapest</p>
	Title of the Paper/Vol./No./ Page	Mechanism of Ru(III) catalysis in acid bromate oxidn of 2-methylcyclohexanol, 39(2),243-48	
	Department of the Teacher	Chemistry	
	Name of the Journal	React. Kinet. Catal. Lett	
	Year of Publication	1989	
	ISSN	0133-1736	
	Link of the recognition in UGC enlistment of the Journal		
238	Name of the Author	Sheila Srivastava	<p>Oxidation Communications 12, Nos 3-4, 140-146 (1989)</p> <p>Ru(III) CATALYSIS IN OXIDATION OF SOME CYCLIC ALCOHOLS BY ACID BROMATE: A KINETIC STUDY B. SINGH* and SH. SRIVASTAVA Chemical Laboratories, University of Allahabad, Allahabad-2 (India)</p> <p>ABSTRACT Kinetic investigations on Ru(III) catalyzed oxidation of cyclohexanol (cyclo) and cyclohexanol (cyclo) by acidic solution of potassium bromate in the presence of mercuric acetate as scavenger have been made in the temperature range of 30-45°C. The rate shows zero-order kinetics both in bromate and hydrogen ions, but order of the reaction in two and one with respect to substrate and Ru(III) respectively. Insignificant influence of chloride ions, mercuric acetate and ionic strength of the medium was observed, while the reaction showed negative steric effect. A transient complex, formed between $[RuCl_2(H_2O)_4]^+$ and cyclic alcohol $[RuCl_2(H_2O)_2]^+$ being reactive species of ruthenium(III) chloride in 1:2 ratio, disproportionates in a slow and rate-determining step to give cyclohexanone and ruthenium(III) hydride, which on interaction with acid bromate in a fast step regenerates catalytic species for recycling. Activation parameters have been calculated. The rate of oxidation increases in the order cyclohexanol > cyclohexanol.</p> <p>INTRODUCTION Potassium bromate has been earlier, used in oxidation of some compounds^{1,2} as oxidant. Some attention has been paid to explore the catalytic role of ruthenium(III) chloride with potassium as an oxidant³ and the results have not been interpreted so as to reveal a clear picture of the mode of catalysis processes. This prompted us to undertake the present investigation which consists of acid bromate oxidation of cyclohexanol and cyclohexanol in the presence of ruthenium(III) chloride as catalyst and mercuric acetate as scavenger.</p> <p>MATERIALS AND METHODS Aqueous solutions of cyclic alcohols (1% Meq), potassium bromate (BDH, AR), sodium perchlorate and mercuric acetate (i.e. Meq) were prepared by dissolving the weighed amount of samples in triple distilled water. Perchloric acid (80%) of R. Meq grade was used as a source of hydrogen ions. Ruthenium(III) chloride (Johnson Matthey) solution was prepared by dissolving the sample in hydrochloric acid of known strength. All other reagents were of highest quality available.</p> <p>* For correspondence. 140</p>
	Title of the Paper/Vol./No./ Page	Ru(III) catalysis in oxidation of some cyclic alcohols by acid bromate : A kinetic study, 12(3-4),140-146..	
	Department of the Teacher	Chemistry	
	Name of the Journal	Oxid. Commun.	
	Year of Publication	1989	
	ISSN	0209-4541	
	Link of the recognition in UGC enlistment of the Journal		

239	Name of the Author	Sheila Srivastava
	Title of the Paper/Vol./No./ Page	Ruthenium(III) catalysis in oxidn of cyclo- heptanol by acid bromate A kinetic study 65, 844-846
	Department of the Teacher	Chemistry
	Name of the Journal	J. Indian Chemical Soc.,
	Year of Publication	1988.
	ISSN	0019-4522
	Link of the recognition in UGC enlistment of the Journal	

