IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 12, Issue 4, December 2021
Impact Factor: 5.731

Kinetic and Mechanistic study of Oxidative Transformation of Mandelic acid by Pyridiniumdichromate in DMF-Water Medium

Niharika Vyas[1], Y. K. Mishra[2], B. K. Dangarh[3]
Reearch Scholar, Government Arts and Science College, Ratlam[1]
Professor & Head of Chemistry Department, Government Arts and Science College, Ratlam[2]
Professor of Chemistry Department, Swami Vivekannad Government P.G. College Neemuch[3]
niharikavyas03@gnmail.com[1], mishra.yashwant@rediffmail.com[2], bkdangarh11@gmail.com[3]

Abstract: *Oxidation of mandelic acid by Pyridinium dichromate was studied in the presence of perchloric acid in DMF-H_2O medium at 40 ºC. The kinetics of the reaction was followed spectrophotometrically at λ max = 355 nm. The reaction is unit dependence on each of PDC, [H^+] and [substrate]. Michaelis-Menten type kinetics was observed. The reactions were studied at different temperature [30, 35, 40, 45, 50 ºC] and activation parameters were computed.*

Keywords: Chromium, Michaelis-Menten, Oxidation of Mandelic acid, Pyridinium dichromate, Spectrophotometrically

REFERENCES

[1]. Shanker A.K., Carlos Cervantes, Herminia Loza-Tavera and Avudainayagam S., Chromium toxicity in plants, Environment International, 31, 739–753 (2005)
[2]. Kostecki P.T., Chromium in soil : Perspectives in Chemistry, health and environmental regulation, J. Soil Contamin., 6, 561-568 (1998)
[3]. Corey E.J. and Shmidt G.; Tetrahedron Lett., 399, (1979)