

AZOCOUPPLING REACTION OF CEPHALOSPORIN ANTIBIOTICS WITH 8-HYDROXYQUINOLINE AND ITS APPLICATION IN THE ANALYSIS OF MEDICINAL PRODUCTS

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References:

1. Abounassif, M.A.; Mian, N.A.; Mian, M.S. Analytical profile of ceftazidime. *Anal Profiles Drug Subst.* **1990**, 19, 95-121. [https://doi.org/10.1016/S0099-5428\(08\)60365-2](https://doi.org/10.1016/S0099-5428(08)60365-2)
2. Owens, H.M.; Dash, A.K.; Ceftriaxone sodium: comprehensive profil. *Profiles Drug Subst. Excip. Relat. Methodol.* **2003**, 30, 21–57. [https://doi.org/10.1016/S0099-5428\(03\)30002-4](https://doi.org/10.1016/S0099-5428(03)30002-4)
3. Derzhavna Farmakopeya Ukrayiny v 3 t., 2-e vyd., Kharkiv: Derzhavne pidpryyemstvo «Ukrayins'kyi naukovyy farmakopeyny tsestr yakosti likars'kykh zasobiv», **2014**, T. 3., 732 s.
4. Derzhavna Farmakopeya Ukrayiny, 2-e vyd., Dopovneniya 2., Kharkiv: Derzhavne pidpryyemstvo «Ukrayins'kyi naukovyy farmakopeyny tsestr yakosti likars'kykh zasobiv», **2018**, 336 s.
5. Arun, K.C.; Saravanan, R.; Balachandar, M.V.; et al. UV-Spectrophotometric determination of ceftazidime in pure and pharmaceutical formulation. *J Chem. Pharm. Res.* **2010**, 2 (1), 424-431.
6. Shah, H.B.; Sen, A.K.; Zanwar, A.; et al. Method development and validation for ceftazidime injection by UV-vis spectrophotometer. *Pharm. Sci. Monitor.* **2013**, 4 (3), 333–342.
7. Buchra, M.U.; Rahman, F.; Huda, N.; et al. Development and validation of UV spectrophotometric method for determination of ceftazidime in bulk and pharmaceutical formulation. *Int. Res. J. Pharm.* **2013**, 4, (11), 26-29.
8. El-Shaboury, S.R.; Saleh G. A., Mohamed, F. A.; et al. Analysis of cephalosporin antibiotics. Review. *J. Pharm. Biomed. Anal.* **2007**, 45 (1), 1–19. <https://doi.org/10.1016/j.jpba.2007.06.002>
9. Bhaskar Reddy, C.M.; Subbareddy, G.V. Development and validation of UV–Spectrophotometric methods for estimation of ceftriaxone in bulk and tablet dosage form. *Int. J. Chem. Tech Res.* **2013**, 5 (1), 472–477.
10. Uri, V.J.; Jain, T.C. Colorimetric detection and spectrophotometric determination of the aminothiazolylalkoxyimino β -lactams. *J. Antibiot.* **1985**, 39 (5), 669–675. <https://doi.org/10.7164/antibiotics.39.669>
11. Ilyas, S.A.; Imran, M.; Kumar, N. Development of spectrophotometric method for determination of ceftriaxone sodium in different brands of pharmaceutical preparation involving diazotation. *IJPSR.* **2015**, 6 (12), 5164 – 5173. [https://doi.org/10.13040/IJPSR.0975-8232.6\(12\).5164-73](https://doi.org/10.13040/IJPSR.0975-8232.6(12).5164-73)
12. Mruthyunjayaswamy, B.H.M.; Hiremath, B.; Malipatil, S.M.; et al. Spectrophotometric estimation of ceftazidime in pure and pharmaceutical forms. *Asian J. Chem.* **2007**, 19 (5) 3770-3774.
13. Singh, D.; Nishal, V.; Bhagwan, S.; et al. Electroluminescent materials: metal complexes of 8-hydroxyquinoline. *Mater. Des.* **2018**, 156, 215–228.
14. Oliveri, V.; Vecchio, G. 8-Hydroxyquinolines in medicinal chemistry: A structural perspective. *Eur. J. Med. Chem.* **2016**, 120, 252–274. <https://doi.org/10.1016/j.ejmech.2016.05.007>
15. Park, S.-Yo.; Ghosh, P.; Park, S. O.; et al. Origin of ultraweak fluorescence of 8- hydroxyquinoline in water: photoinduced ultrafast proton transfer. *RSC Adv.* **2016**, 6(12) 9812 –9821.
16. Kostiv, O.; Rydchuk, P.; Korkuna, O. Voltammetric determination of ceftriaxon in pharmaceuticals. *Visnyk Lviv Univ. Ser. Chem.* **2019**, 60 (1), 200–209.
17. Zollinger H., Diazo chemistry I: Aromatic and heteroaromatic compounds. Weinheim: VCH Verlagsgesellschaft mbH.; **1994**. 457 p.