

A DIFFERENCE SPECTROPHOTOMETRIC METHOD FOR DETERMINATION OF ALIMEMAZINE BASED ON THE ABSORBANCE OF ITS SULPHOXIDE

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References:

1. Courvoisier, S.; Ducrot, R.; Fournel, J.; Julou, L. Propriétés pharmacologiques générales d'un nouveau dérivé de la phénothiazine, neuroleptique puissant à action neurovégétative discrète, le chlorhydrate de (méthyl-2' diméthyl-amino-3' propyl-1')-10 phénothiazine. *Arch. Int. Pharmacodyn. Ther.* **1958**, 115(1-2), 90-113. URL: <https://pubmed.ncbi.nlm.nih.gov/13545890>.
2. European Pharmacopoeia. 10th edn. 2020. URL: <https://www.edqm.eu/en/european-pharmacopoeia-ph-eur-10th-edition> (accessed on 25 January 2023).
3. Bekker, R.A.; Bykov, Yu.V.; Alimemazine: a review. *Psychiatry and Psychopharmacotherapy (P.B. Ganushkin Journal)*. **2016**, 18(6), 10-20. URL: https://www.academia.edu/30959336/Alimemazine_a_review.
4. *British Pharmacopoeia*; Stationery Office on behalf of the Medicines and Healthcare products Regulatory Agency, 2008.
5. *British Pharmacopoeia*. Vol. I; Stationery Office on behalf of the Medicines and Healthcare products Regulatory Agency, 2022. URL: <https://www.pharmacopoeia.com/the-british-pharmacopoeia> (accessed on 25 January 2023).
6. *British Pharmacopoeia*. Vol. III; Stationery Office on behalf of the Medicines and Healthcare products Regulatory Agency, 2022. URL: <https://www.pharmacopoeia.com/the-british-pharmacopoeia> (accessed on 25 January 2023).
7. Watson, D.G. *Pharmaceutical Analysis*; Elsevier Limited, 2017.
8. *Clarke's Analysis of Drugs and Poisons*; Moffat, A.C.; Osselton, M.D.; Widdop, B., Eds.; Pharmaceutical Press, 2011.
9. Puzanowska-Tarasiewicz, H.; Kuźmicka, L.; Karpińska, J.; Mielech-Łukasiewicz, K. Efficient Oxidizing Agents for Determination of 2,10-Disubstituted Phenothiazines. *Anal. Sci.* **2005**, 21(10), 1149-1153. <https://doi.org/10.2116/analsci.21.1149>.
10. Davidson, A. G. The determination of phenothiazine drugs in pharmaceutical preparations by a difference spectrophotometric method. *J. Pharmac. Pharmacol.* **1976**, 28(11), 795-800. <https://doi.org/10.1111/j.2042-7158.1976.tb04059.x>.
11. Diehl, G., Karst, U. Post-column oxidative derivatization for the liquid chromatographic determination of phenothiazines. *J. Chromatogr. A.* **2000**, 890(2), 281-287. [https://doi.org/10.1016/S0021-9673\(00\)00607-5](https://doi.org/10.1016/S0021-9673(00)00607-5).
12. Blazheyevskiy, M. *Application of derivatization by means of peroxyacid oxidation and perhydrolysis reactions in pharmaceutical analysis*; Ivan Franko LNU, 2017.
13. Blazheyevskiy, M.Ye. Spectrophotometric determination of 10-alkyl phenothiazine derivatives in pharmaceutical forms using peroxyacid oxidation. *Pharm. J.* **2003**, 1, 64-73.
14. Crandall, J.K.; Shi, Y.; Burke, C.P.; Buckley, B. R. *Encyclopedia of Reagents for Organic Synthesis*; John Wiley & Sons, Ltd, 2001. doi: 10.1002/047084289x.rp246.pub3.
15. Spiro, M. The standard potential of the peroxosulphate/sulphate couple. *Electrochim. Acta.* **1979**, 24(3), 313-314. doi: 10.1016/0013-4686(79)85051-3.
16. Merzlikin, S.I.; Kucher, T.V.; Stepanenko, V.I.; Pogosyan, O. H.; Golik, M. Yu.; Zastosuvannia TShKh dlia analitychnoi diahnostyky kombinovanykh otruien prokhlorperazynom. *ZhOFKh.* **2020**, 18(70), 54-58. doi: 10.24959/ophcj.20.195619.
17. Turner, L.K.; Sulphoxides of the Phenothiazine Drugs. *J. Forensic Sci.* **1963**, 4(1), 39-49. doi:10.1016/s0015-7368(63)70145-9.
18. Pena-Pereira, F.; Wojnowski, W.; Tobiszewski, M.; AGREE-Analytical GREENness metric approach and software. *Anal. Chem.* **2020**, 92, 10076-10082. <https://doi.org/10.1021/acs.analchem.0c01887>.
19. Gałuszka, A.; Konieczka, P.; Migaszewski, Z.; Konieczka, P.; Namieśnik, J. Analytical Eco-Scale for assessing the greenness of analytical procedures. *Trends Anal. Chem.* **2012**, 37, 61-72. <https://doi.org/10.1016/j.trac.2012.03.013>.