

**Chemiluminescence method for the assay of perphenazine in drug formulation using permanganate in sulphuric acid with flow injection technique and a chemometrical optimization approach.**

Sultan, Salah M.; Abdennabi, Abdullah M. S.; Almuaid, Ala'ddin M. Chemistry Department, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia. *Talanta* (1999), 49(5), 1051-1057. Publisher: Elsevier Science B.V., CODEN: TLNTA2 ISSN: 0039-9140. Journal written in English. CAN 131:233633 AN 1999:606164 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

**Abstract**

An accurate and selective flow injection anal. chemiluminescence (CL) method for the assay of perphenazine was explored. A 394 ppm K permanganate in 0.289 M H<sub>2</sub>SO<sub>4</sub> soln. was used as the chemiluminogenic reagent. A photomultiplier tube was used as a detector at a total flow rate of 4.94 mL/min. Perphenazine was detd. using a linear calibration plot with the equation  $mV = -4.488 + 0.1162 C$  (where C is perphenazine concn. in ppm) for the concn. range of 50-350 ppm. The correlation coeff. was 0.9989 for 5 measurements and the relative std. deviation was <2.33%. A throughput over 110 samples/h can be reached. Three factors (flow rate, sulfuric acid and permanganate concns.) influenced the chemiluminescence intensity produced. Their interaction effects were investigated using a 2<sup>3</sup> factorial design chemometrical approach. The results revealed higher interactions between sulfuric acid and permanganate and less interactions for both reagents with the flow rate. An interference study indicated that the method is suitable for anal. of pharmaceutical preps.