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Spectrophotometric Determination of 5-Aminosalicylic Acid in Pharmaceutical Samples

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Abstract : A Simple, accurate and precise spectrophotometric method for the quantitative analysis of determination of 5-aminosalicylic acid is described. This method is based on the reaction of 5-aminosalicylic acid with nitrite in acid medium to form diazonium ion, which is coupled with acetylacetone in basic medium to form azo dyes, which shows absorption maxima at 470 nm. The method obeys Beer's law in the concentration range of 0.5-11.2 gml-1 of 5-aminosalicylic acid with acetylacetone. The molar absorptivity and Sandell's sensitivity of 5-aminosalicylic acid -acetylacetone azo dye is 2.672 ×104 lmol-1cm-1, 5.731 × 10-3 gcm-2 respectively. The dye formed is stable for 10 hrs. The optimum reaction conditions and other analytical parameters are evaluated. Interference due to foreign organic compounds have been investigated. The method has been successfully applied to the determination of 5-aminosalicylic acid in pharmaceutical samples.

Keywords : spectrophotometry, diazotization, mesalazine, nitrite, acetylacetone
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