



## **Solvent extraction and spectrophotometric determination of Fe(III) by using 5-bromo salicylidene-2-aminothiophenol (BSATP) as an analytical reagent**

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**Abstract:** A spectrophotometric method has been developed for the determination of Fe (III) using 5-bromo salicylidene-2-aminothiophenol (BSATP) as an extractive reagent.

The reagent forms a colored complex which has been quantitatively extracted into chloroform at pH 8.2. The method obeys Beer's law over a range of 1 to 10 ppm. The molar absorptivity is  $16460 \text{ L mol}^{-1} \text{ cm}^{-1}$  and Sandell's sensitivity is  $0.01639 \mu\text{g cm}^{-2}$  respectively. The proposed method is very sensitive and selective. This method has been successfully applied to synthetic and commercial samples.

**Key words:** Spectrophotometric determination, 5-bromo salicylidene-2-aminothiophenol (BSATP), chloroform, molar absorptivity.

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