



Determination of Indium (III) by Simple Spectrophotometric Technique Using Bromocresol Purple Dye

Aparna Bhardwaj

Department of Chemistry, Mithibai College, Vile Parle (W), Mumbai, **INDIA**

Email: dr.aparna73@rediffmail.com

Accepted on 15th November 2017, Published online on 27th November 2017

ABSTRACT

A simple and sensitive spectrophotometric method has been developed for the determination of Indium (III) using Bromocresol purple dye as a reagent. Indium (III) forms an Orange Yellow coloured complex with the reagent in acidic medium at pH 4.0. The molar absorptivity and Sandell's sensitivity of coloured species are $1.6 \times 10^5 \text{ dm}^3 \text{ mol}^{-1} \text{ cm}^{-1}$ and $0.00617 \mu\text{g cm}^3^{-1}$ respectively. Beer's law is obeyed in the range of $0.2296\text{-}2.2960 \mu\text{g mL}^{-1}$ of Indium(III) at λ_{max} 485 nm. Indium (III) forms a 1: 3 complex and the effect of interferences was studied. The merits and demerits of several other spectrophotometric methods for Indium (III) are also discussed.

Keywords: Spectrophotometric technique, Indium(III), Bromocresol Purple.
