



## **Spectrophotometric determination of micro amounts of Uranium (VI) using Bromocresol Purple as an analytical reagent**

**Aparna Bhardwaj\***

\*Department of Chemistry, B.N. Bandodkar college, Thane, Mumbai

Email: [dr.aparna73@rediffmail.com](mailto:dr.aparna73@rediffmail.com)

Received on 31<sup>st</sup> December and finalized on 10<sup>th</sup> January 2013

---

### **ABSTRACT**

*Bromocresol Purple dye is used as a reagent for the spectrophotometric determination of Uranium (VI). The reagent forms a Strawberry red colored complex with Uranium (VI) instantaneously at pH 5.0 - 6.0. A six fold molar concentration of the reagent is necessary for the full development of the color intensity. Beer's law is valid over the concentration range 0.2380 -2.142  $\mu\text{gml}^{-1}$ . The complex has absorption maximum at 498 nm with molar absorptivity  $2.1 \times 10^5 \text{ Lmol}^{-1}\text{cm}^{-1}$  and sensitivity is 4.76 ng  $\text{ml}^{-1}$  respectively. The standard deviation has been found to be 0.00063.*

**Keywords:** Spectrophotometric determination, Uranium (VI), Bromocresol purple.

---