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Flow Injection Extraction - Spectrophotometric Determination of Bismuth with Di-(hydrogenated tallow alkyl) dimethylammonium Chloride

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**Abstract:** Bismuth(III) (0-25  $\mu$  g/ml) is determined spectrophotometrically at 513 nm after extraction into dichloromethane of the ion associate di-(hydrogenated tallow alkyl)dimethylammonium tetraiodobismuthate. The reagent stream is distilled water, merged with 1.0 M sulfuric acid, 5% potassium iodide and 5% (w/v) ascorbic acid solution. The reagent stream is 0.2% (w/v) di-(hydrogenated tallow alkyl)dimethylammonium chloride solution. The injection rate is 15  $\text{h}^{-1}$ . The calibration graph is linear up to 25  $\mu$  g/ml. The detection limit is 0.35  $\mu$  g/ml Bi. The system is applied on water samples and copper-based alloys.

**Key Words:** Extraction, Flow-Injection, Bismuth, Di-(hydrogenated tallow alkyl)dimethylammonium chloride.

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