

**Summary:** Chloride reacts with mercuric thiocyanate, liberating thiocyanate ion by forming soluble mercuric chloride. In the presence of ferric ion, free thiocyanate ion forms a highly colored ferric thiocyanate complex. The colored complex is measured at 480 nm.

**Interferences:** There are no significant chemical interferences for this method. Filter turbid samples prior to analysis.

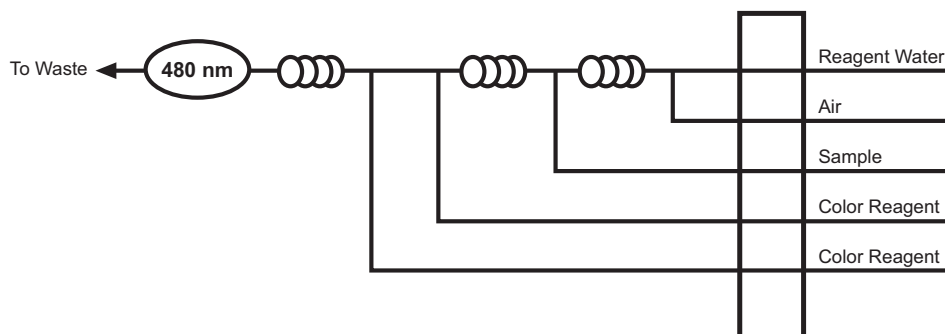
**Performance Specifications:**

Range:	1.0–200 mg/L
Throughput:	72 samples/hour
Precision:	
40 mg/L	<2% RSD
160 mg/L	<1% RSD
Method Detection Limit (MDL):	0.31 mg/L

**Chemicals:**

Brij®-35, 30% w/v (OI Analytical Part #A21-0110-33)	Methanol, CH <sub>3</sub> OH
Ferric Nitrate Nonahydrate, Fe(NO <sub>3</sub> ) <sub>3</sub> •9H <sub>2</sub> O	Nitric Acid, concentrated, HNO <sub>3</sub>
Mercuric Thiocyanate, Hg(SCN) <sub>2</sub>	Sodium Chloride, NaCl
	Thioacetamide, CH <sub>3</sub> CSNH <sub>2</sub>

**Basic Flow Diagram:**



**Selected References:**

Zall, D.M.; Fisher, D.; Garner, M.Q. Photometric Determination of Chloride in Water. *Analytical Chemistry* **1956**, 28 (11), 1665–1668.

*Methods for Chemical Analysis of Water and Wastewater*; EPA-600/4-79-020; U.S. Environmental Protection Agency, Office of Research and Development, Environmental Monitoring and Support Laboratory: Cincinnati, OH, 1984; Method 325.2.

*Standard Methods for the Examination of Water and Wastewater*, 20th ed.; American Public Health Association: Washington, D.C., 1998.

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