

Summary: Chloride reacts with mercuric thiocyanate, liberating thiocyanate ion by the formation of 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.

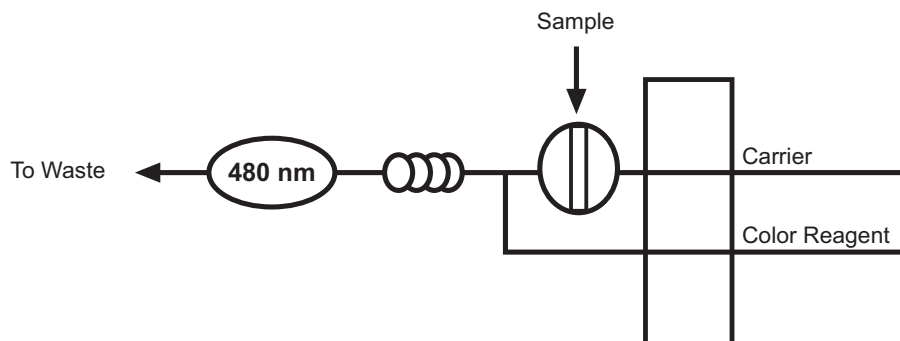
Performance Specifications:

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 ₃ OH
Ferric Nitrate Nonahydrate, Fe(NO ₃) ₃ •9H ₂ O	Nitric Acid, concentrated, HNO ₃
Mercuric Thiocyanate, Hg(SCN) ₂	Sodium Chloride, NaCl
	Thioacetamide, CH ₃ CSNH ₂

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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