

## Method Abstract

**Summary:** Prior to analysis, cyanide is released from cyanide complexes by off-line manual distillation and collected in a sodium hydroxide receiver solution. Sodium cyanide is converted to cyanogen chloride by a reaction with chloramine-T at a pH of less than eight. The cyanogen chloride then reacts with pyridene-barbituric acid to form a red-colored complex, and the absorbance is measured at 570 nm.

**Interferences:** Interferences are eliminated or reduced by distillation prior to the analysis. Treat samples containing sulfide by adding powdered lead carbonate. Treat samples containing residual chlorine by adding ascorbic acid.

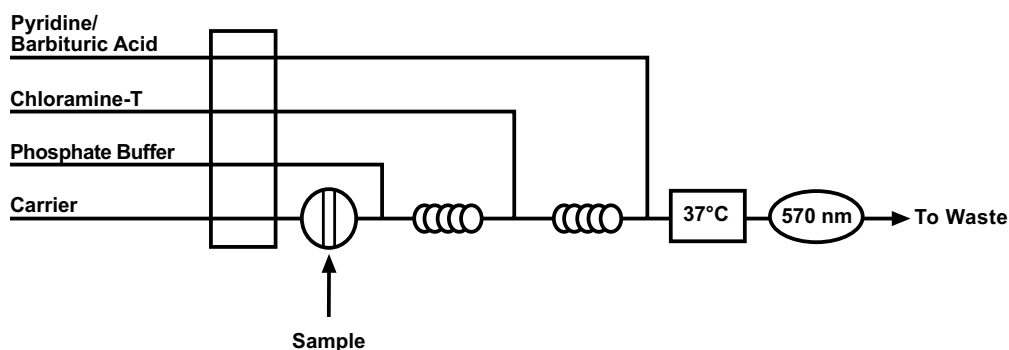
**Performance Specifications:**

Range:	2.0–500 µg/L
Throughput:	50 samples/hour
Precision:	
100 µg/L	<0.5% RSD
400 µg/L	<0.5% RSD
Method Detection Limit (MDL):	0.11 µg/L

**Chemicals:**

Barbituric Acid, C <sub>4</sub> H <sub>4</sub> N <sub>2</sub> O <sub>3</sub>	Pyridine, C <sub>5</sub> H <sub>5</sub> N
Chloramine-T, C <sub>7</sub> H <sub>7</sub> ClNO <sub>2</sub> SNa•3H <sub>2</sub> O	Sodium Hydroxide, NaOH
Hydrochloric Acid, concentrated, HCl	Sodium Phosphate Monobasic Monohydrate, NaH <sub>2</sub> PO <sub>4</sub> •H <sub>2</sub> O
Potassium Cyanide, KCN	

**Basic Flow Diagram:**



**Selected References:** *Methods for the 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, 1993; Method 355.3.

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