

# Method Abstract

**Summary:** The ammonia ion reacts with alkaline phenol and hypochlorite to form indophenol blue in an amount that is proportional to the ammonia concentration. The blue color is intensified with sodium nitroferrocyanide, and the absorbance is measured at 640 nm.

**Interferences:** Filter or centrifuge turbid samples prior to analysis. Add sodium citrate complexing reagent to prevent precipitation of calcium and magnesium hydroxides. Samples with background absorbances at the analytical wavelength may interfere.

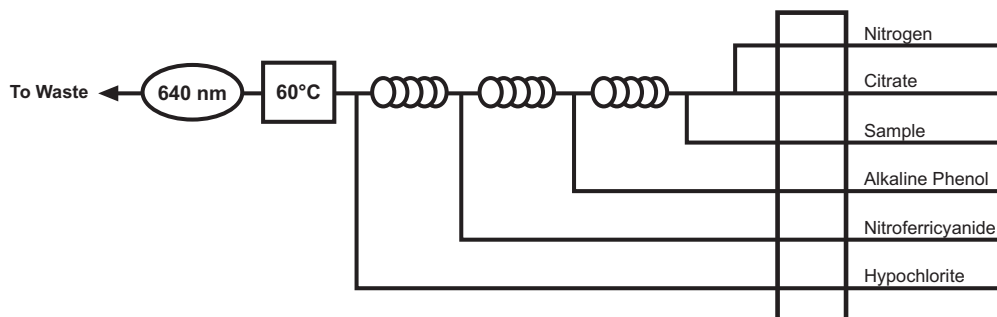
**Performance Specifications:**

Range:	0.10–5.0 µmoles/L
Throughput:	36 samples/hour
Precision:	
0.10 µmoles/L	1% RSD
5.0 µmoles/L	<1% RSD
Method Detection Limit (MDL):	0.077 µmoles/L

**Chemicals:**

Ammonium Sulfate, (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>	Sodium Citrate Dihydrate, C <sub>6</sub> H <sub>5</sub> Na <sub>3</sub> O <sub>7</sub> •2H <sub>2</sub> O
Brij®-35, 30% w/v	Sodium Hydroxide, NaOH
(OI Analytical Part #A21-0110-33)	Sodium Hypochlorite, 5.25% available chlorine (household bleach), NaOCl
Magnesium Sulfate Heptahydrate, MgSO <sub>4</sub> •7H <sub>2</sub> O	Sodium Nitroferrocyanide Dihydrate, Na <sub>2</sub> Fe(CN) <sub>5</sub> NO•2H <sub>2</sub> O
Phenol, solid or liquified, 88%, C <sub>6</sub> H <sub>5</sub> OH	
Sodium Chloride, NaCl	

**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 350.1.

Brij is a registered trademark of ICI Americas.