

Summary: Ammonia 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 660 nm.

Interferences: Prevent precipitation of calcium and magnesium hydroxides by adding EDTA complexing reagent. Filter turbid samples prior to analysis. Samples with background absorbance at the analytical wavelength may interfere.

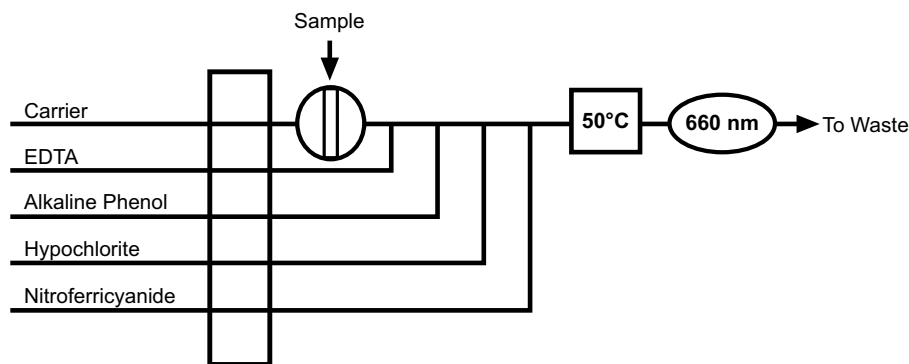
Performance Specifications:

| | |
|-------------------------------|-----------------------------------|
| Range: | 0.01–25 mg/L NH ₃ as N |
| Throughput: | 51 samples/hour |
| Precision: | <1% RSD |
| 0.50 mg/L | |
| Method Detection Limit (MDL): | 0.002 mg/L NH ₃ as N |

Chemicals:

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|---|---|
| Ammonium Sulfate, (NH ₄) ₂ SO ₄ | Kleenflow Basic (OI Analytical Part # A001252) |
| Brij [®] -35, 30% w/v (OI Analytical Part #A21-0110-33) | Phenol, solid or liquefied, 88%, C ₆ H ₅ OH |
| Chloroform, CHCl ₃ | Sodium Hydroxide, NaOH |
| Ethylenediaminetetraacetic Acid, Disodium Salt Dihydrate (EDTA), C ₁₀ H ₁₆ N ₂ Na ₂ O ₈ •2H ₂ O | Sodium Hypochlorite Solution, 5.25% available chlorine (household bleach), NaOCl |
| Kleenflow [®] Acidic (OI Analytical Part #A001251) | Sodium Nitroferrocyanide Dihydrate, Na ₂ Fe(CN) ₅ NO•2H ₂ O |

Basic Flow Diagram:



Note: This method complies with USEPA Method 350.1.

Selected References: *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 350.1.

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

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