Ammonium Analysis

Reagents
Sodium Salicylate solution
In a 100 ml volumetric flask of DI water mix
6.8 g sodium salicylate
5.0 g sodium citrate
5.0 g sodium tartrate
25 mg sodium nitroprusside

NaOH Solution
In a 100 ml volumetric flask
6 g sodium hydroxide
Bring to volume

Bleach Solution
Make fresh each day in 50 ml volumetric flask
1 ml bleach
Bring to volume with NaOH Solution

Matrix
In a 1 liter volumetric flask
74.59 g KCl (1M KCl) & Bring to volume with DI water

Standard (25 ppm NH₄)
In 100 ml volumetric flask
10 ml NH₄ standard (Certified 250 ppm NH₄)
Bring to volume with matrix

Mix standards in 15 ml centrifuge tubes using dilutions from the adjacent table.

Procedure
In a clear 96-well plate
Assay the standards in duplicate (Col. 1 & 2) - 50 µl standard
Assay the samples in quadruple – add 50 µl of sample to each well. A 96-well plate can hold 20 samples with standards.

Add 150 µl salicylate solution to each well using the multi-channel pipette
Add 150 µl bleach solution to each well using the multi-channel pipette

Tap edge of plat to mix well and incubate 50 min. Read plate at 650 nm.

Method detection limit: 0.1 - 50 ppm