

Colorimetric Method for Measuring Nitrogen as Ammonia

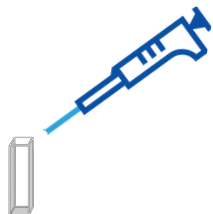
SALICYLATE METHOD (ISO 15923-1)

Method Description

Ammonium reacts with hypochlorite, formed by alkaline hydrolysis of sodium dichloroisocyanurate, and with salicylate at a pH of at least 12.6 in the presence of sodium nitroprusside as a catalyst. This produces a compound with a blue color (Indophenol).

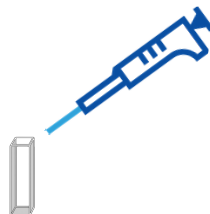
Test Procedure

1. Pipette 3330 μL * of the sample into the cuvette.

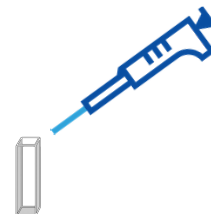


* μL = microliter

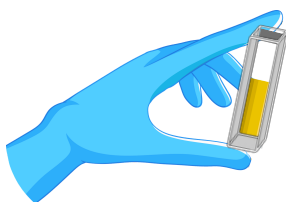
2. Pipette 330 μL of RGT-AMMONIA-NH3-BTL-1-OF-2 into the cuvette.



3. Pipette 330 μL of RGT-AMMONIA-NH3-BTL-2-OF-2 into the cuvette.



4. Cap cuvette, and shake 10-15 times to mix reagent & sample within.



5. Wait duration of reaction time: 10 minutes.
Note: Solution should turn green during reaction time.



6. Insert cuvette into the UV-Vis and record absorbance of sample.



Be sure to use a new pipette tip for every addition. Replace the pipette tip between every step. Always dispose of all waste properly.

Expected Limits of Detection

Path Length (mm)	Method Detection Limit (mg N/L)
10	0.005
50	0.003

Detection limits were calculated to be equal to three times the standard deviation of a series of 10 replicate measurements of the calibration blank.

Preparation of Calibration Standards

Use the following volumes to prepare a Calibration Curve using a stock standard containing 10 mg/L of Nitrogen from Ammonia. Select at least 3-4 calibration standards that bracket your expected concentration range. Dilute all standards in DI H₂O or a matrix most suited to your sample type.

Concentration (mg N/L)	Volume of Standard Aliquot (mL)	Final Volume (mL)
0.00	0.00	50
0.02	0.20	100*
0.05	0.25	50
0.10	0.50	50
0.25	1.25	50
0.50	2.50	50
0.75	3.75	50
1.00	5.00	50

* Larger final volume needed for 0.02 mg N/L standard due to small standard aliquot volume.



Calibration Tip:

If using different calibration standards to construct your calibration curve, ensure that the concentrations of neighboring standards do not exceed a ten fold difference.