

Principle

Nitrate ions in solution containing sulphuric and phosphoric acids react with 2.6-dimethylphenol to form 4-nitro-2.6-dimethylphenol.

Range of Application

Waste water (beware of interferences!), drinking water, raw water, surface water, soils, substrates, nutrient solutions

Interferences

T1
2000 mg/l K ⁺
1500 mg/l Na ⁺
1000 mg/l Cl ⁻
500 mg/l OZV / COD *)
250 mg/l Ca ²⁺
100 mg/l Ag ⁺
50 mg/l Pb ²⁺ , Zn ²⁺ , Ni ²⁺ , Fe ³⁺ , Cd ²⁺ , Cu ²⁺
20 mg/l Fe ²⁺
10 mg/l Co ²⁺
5 mg/l Cr ⁶⁺
2 mg/l NO ₂ ⁻

*) (Kaliumwasserstoffalaat)
(Potassium hydrogen phthalate)

The ions listed in T1 have been individually checked up to the given concentrations and do not cause interference. We have not determined cumulative effects and the influence of other ions.

High loads of oxidizable organic substances (COD) cause the reagent to change colour and give high-bias results. The test can thus only be used for waste water analyses if the COD is less than 500 mg/l. The measurement results must be subjected to plausibility checks (dilute and/or spike the sample).

Sample Volume	0,2 mL
Reagent Volume	1,0 mL
Reagent Filling	120 mL (2* 60 mL)
Temperature Sample/sample cuvette	20 – 24°C
pH sample	3 - 10

Method Library:

APC340 is pre-programmed in the method library. Please check under Settings/Software/Application/Methods **Nitrate** and Tests **APC340**.

Settings

General | Methods/Tests | QC/Blanks | Reagents trays | Colors | Remote messaging | Other parameters

Sample profiles | **Methods** | Tests | Other parameters

Methods definitions:

- Ammonium
- Chloride
- COD
- COD high
- Formaldehyde
- ISO-COD
- LCA722
- LCA722_Reagent
- LCK Ammonium
- Nitrate**
- Nitrite
- Orthophosphate
- Phenol
- Phosphate
- Reagent Volume
- Sample Volume
- TNb

Add Method | Delete Method

Reading 1 (Concentration):

Low-range test: APC339 | Underrange: 0.230 | Overage: 13.500

Middle-range test: None | Underrange: 0.000 | Overage: 0.000

High range test: APC340 | Underrange: 5.000 | Overage: 35.000

☐ Redo samples with underrange error if possible.

☐ Redo samples with overrange error if possible.

--> High-range cuvette overrange dilution factor: 2

☐ Use default samplevolume if sample is diluted for the test before using lower range test.

☐ Redo samples with other error (barcode/absorption error).

Method priority level: 0

☒ Stir sample in samplecup by default.

☒ Always clean/flush needle after aspirating/dispensing sample.

Waiting time after start processing cuvet before starting processing next cuvet of test: 0 sec.

OK | Cancel

Settings

General | Methods/Tests | QC/Blanks | Reagents trays | Colors | Remote messaging | Other parameters

Sample profiles | Methods | **Tests** | Other parameters

Tests definitions:

- APC114
- APC138
- APC238
- APC303
- APC304
- APC314
- APC338
- APC339
- APC340**
- APC341
- APC342
- APC346 I
- APC346 II
- APC348
- APC348o
- APC349
- APC349o
- APC350
- APC350o
- APC400
- APC500
- LCA722_0.5
- LCA722_2.0
- LCA722_R_0.5
- LCA722_R_2.0
- LCK014
- LCK302

Add test | Delete test

1. Add sample to cuvette | Volume (µl): 200 | Speed (µl/s): 200

2. Add reagent to cuvette | Volume (µl): 1000 | Speed (µl/s): 500 | Reagent: A 340

3. Shake cuvette by inversion | Time (sec): 10 | Speed inv. (%): 50 | Speed rot. (%): 50

4. (Cooling) delay cuvette | Time (min): 15 | Priority: High

5. Measure cuvette

6. None

7. None

8. None

9. None

10. None

11. None

12. None

☐ Blank measurement needed for test. ☐ Only measure blank. ☐ Re-create blank if re-measurement is needed for test.

☐ Use reaction-cuvette.

Final capping overload (0-99%): 35

OK | Cancel

Run the APC340 Nitrate method

Create a Run like described in the QUICK GUIDE

- Place the APC340 cuvettes according to the settings in the Software in the cuvette racks.
- Place the samples according to the settings in the Software in the sample racks
- Place the Reagent A according to the settings in the Reagent trays

Settings

General | Methods/Tests | AQC/Blanks | Reagents trays

Tray 1 (Left):

	Name:	Volume:	Re-filled:
Position 1:	A 339	50.00	<input checked="" type="checkbox"/>
Position 2:	A 340	5.20	<input type="checkbox"/>
Position 3:		0.00	<input type="checkbox"/>
Position 4:		0.00	<input type="checkbox"/>
Position 5:	B 348/349/350	27.00	<input type="checkbox"/>
Position 6:	C 348/349/350	29.60	<input type="checkbox"/>

Volume in reagents cup:

Volume in filled reagents cup: ml.

Warning level reagents cup: ml.

Other liquid level settings:

dZ Tray definition --> Max. Liquid level:

dZ 10th of mm --> ml.:

OK

Cancel

- Check if fresh and enough pipette tips are available
- Check if enough Rinsing/Dilution water is available
- Initialize the AP 3900 multi and the Dispenser



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