

APC348

Phosphorus ortho

MR 0,5 – 5,0 mg/L PO₄-P / 1,5 – 15,0 mg/L PO₄

DOC312.53.94344

Principle

Phosphate ions react with molybdate and antimony ions in an acidic solution to form an antimonyl phosphomolybdate complex, which is reduced by ascorbic acid to phosphormolybdenum blue

Range of Application

Waste water, drinking water, boiler water, surface water, process analysis

Interferences

T1	
20 g/l: SO ₄ ²⁻	100 mg/l: J ⁻
10 g/l: Cl ⁻	50 mg/l: SiO ₂
4 g/l: K ⁺ , Na ⁺	40 mg/l: Hg ²⁺
1 g/l: Ca ²⁺	20 mg/l: Pb ²⁺
500 mg/l: NO ₃ ⁻	10 mg/l: Ag ⁺ , Sn ⁴⁺
400 mg/l: Mg ²⁺	5 mg/l: Cr ²⁺
200 mg/l: Co ²⁺ , Fe ²⁺ , Fe ³⁺ , Zn ²⁺ , Cu ²⁺ , Ni ²⁺ , NO ₂ ⁻ , Cd ²⁺ , NH ₄ ⁺ , Mn ²⁺ , Al ³⁺ , CO ₃ ²⁻	1 mg/l: Cr ⁶⁺

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. The measurement results must be subjected to plausibility checks (dilute and/or spike the sample).

Sample Volume	0,5 mL
Reagent B Volume	0,2 mL
Reagent C Volume	0,2 mL
Reagent B Filling	60 mL
Reagent C Filling	30 mL
Reagent D Filling	12 g
Temperature Sample/sample cuvette	15 – 25°C
pH sample	2 - 10

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

Buttons: Add Method, Delete Method

Reading 1 (Concentration):

Low-range test: APC349o Underrange: 0.050 Overrange: 1.500

Middle-range test: APC348o Underrange: 0.500 Overrange: 5.000

High range test: APC350o Underrange: 2.000 Overrange: 20.000

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/absorbion 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.

Buttons: OK, Cancel

Method Library:

APC348 ortho is pre-programmed in the method library. Please check under Settings/Software/Application/Methods **Orthophosphate** and Tests **APC348o**.

Settings

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

Sample profiles | Methods | Tests | Other parameters

Tests definitions:

Step	Action	Volume (µl)	Speed (µl/s)	Time (sec)	Time (min)	Speed inv. (%)	Speed rot. (%)	Priority
1.	Add sample to cuvette	500	500					
2.	Add reagent to cuvette	200	400					Reagent: B 348/349/350
3.	Add reagent to cuvette	200	400					Reagent: C 348/349/350
4.	Shake cuvette by inversion			10		50	50	Speed rot. (%): 50
5.	(Cooling) delay cuvette				10			Priority: Normal
6.	Measure cuvette							
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%): 40

OK Cancel

Note

The APC348 ortho need a preparation of Reagent C:

Use the delivered spoon and take 2 spoonful of Reagent D into Solution C. Invert it for approximately 30 seconds (until it's solved). This solution is stable for 5 days at room temperature.

Run the APC348 ortho Phosphorous method

Create a Run like described in the QUICK GUIDE

- Place the APC348 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 B and C according to the settings in the Reagent trays

Settings

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

Tray 1 (Left):

Position	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: 50 ml

Warning level reagents cup: 5 ml

Other liquid level settings:

dZ Tray definition -> Max. Liquid level: 300

dZ 10th of mm -> ml.: 12

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



HACH LANGE GMBH
Willstätterstraße 11
D-40549 Düsseldorf

Tel. +49 (0) 2 11 52 88-0
Fax +49 (0) 2 11 52 88-143

info-de@hach.com
www.hach.com