

APC400 COD

Chemical Oxygen Demand

MR 0 – 1000 mg/L

DOC312.53.94350

Principle

Oxidizable substances react with sulphuric acid – potassium dichromate solution in the presence of silver sulphate as catalyst. Chloride is masked by mercury sulphate. The green coloration of Cr^{3+} is evaluated.

Range of Application

Water, waste water, process analysis

Interferences

The method can be used for samples (or diluted samples) with chloride concentrations of up to 1000 mg/l.

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

Sample Volume

2 mL

Digestion Temperature/Time

148 °C/2h

Method Library:

APC400 COD is pre-programmed in the method library. Please check under Settings/Software/Application/Methods **ISO-COD** and Tests **APC400**.

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: APC500 Underrange: 0.000 Overrange: 150.000

Middle-range test: None Underrange: 0.000 Overrange: 0.000

High range test: APC400 Underrange: 0.000 Overrange: 1000.00

☐ 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: 10

☒ 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

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Tests definitions:

1. Shake cuvette vertical	Time (sec): 10	Speed (%): 40
2. Add sample to cuvette	Volume (µl): 2000	Speed (µl/s): 500
3. Shake cuvette by inversion	Time (sec): 10	Speed inv. (%): 100
4. Heat cuvette in heater	Time (min): 120	Temperature: 148 °C
5. (Cooling) delay cuvette	Time (min): 5	Priority: Normal
6. Shake cuvette by inversion	Time (sec): 10	Speed inv. (%): 50
7. (Cooling) delay cuvette	Time (min): 30	Speed rot. (%): 100
8. Measure cuvette		Priority: High
9. None		Priority: Normal
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%): 45

Add test
 Delete test

OK
Cancel

Note

The APC400 follows the INTERNATIONAL STANDARD ISO 15705:2002

The APC400 needs a reagent blanc measurement.

The first sample needs to be defined as a **Blanc**,
choose it from the drop-down menu in the Sample Identification

New samples

Sample Identification: Blanc

Tray Identification: 1 Tray Position: 1

Methods / Tests:

Proposal: None

Method:	Test:	Predilution:	Dilution:	Multiples:
ISO-COD	APC400	1.00	1.00	1
None		1.00	1.00	1
None		1.00	1.00	1
None		1.00	1.00	1
None		1.00	1.00	1
None		1.00	1.00	1
None		1.00	1.00	1
None		1.00	1.00	1

☐ Sample is priority sample.
 ☐ Use second cleaning vessel for cleaning.

Add Sample
 Close

Run the APC400 COD method

Create a Run like described in the QUICK GUIDE

- Place the APC400 cuvettes according to the settings in the Software in the APC 400 rack.
- Place the **BLANC** in the 1. position of the sample rack
- Place the samples according to the settings in the Software in the sample racks
- Check if enough Rinsing/Dilution water is available
- Initialize the AP 3800 multi and the Dispenser

Note: First APC 400 cuvette in the tray will be always used as a BLANC. Don't remove this cuvette during the RUN. Whenever a new BLANC is needed the AP3900 multi goes back to position 1 and re-read this BLANC cuvette as "0" reference. This will always happen when the AP3900 multi switches between different methods (common for sample mode).



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