ENVIRONMENTAL EXPRESS®
a Cole-Parmer company

Chemical Oxygen Demand (COD) FAQs

Why are the vials without mercury not EPA approved?
The mercury in the COD vials is derived from mercuric sulfate. It binds the chlorides in the sample which reduces interferences. Only vials that contain mercuric sulfate are EPA approved to ensure this interferent does not affect the sample results.

Which COD vials are EPA approved?
Catalog numbers B1010 (0-150 mg/L range with mercury) and B1015 (0-1500 mg/L range with mercury).

How much chloride will the COD vials with mercury be able to handle?
Up to 2000 ppm of chlorides. If your samples contain more than 2000 ppm they must be diluted.

What other interferences may be present?
Samples with high levels of chloride (>1000 ppm) and low levels of COD (<30% of the vial range) may exhibit false positives. Dilution of the sample or using a vial with a lower range may be necessary in these cases.

Why are the 0-150 mg/L vials and the 0-1500 mg/L vials read at different wavelengths?
The 0-150 mg/L range vials (B1010) measure the decrease in the dichromate ion and are measured at 420nm while the 0-1500 mg/L range vials (B1015) measure the amount of chromic ion produced and are measured at 620nm.

How do I dispose of my COD vials?
All COD vials are considered hazardous regardless if they contain mercury or not. This is due to the presence of sulfuric acid, silver sulfate, and potassium dichromate in the vials. Environmental Express offers a disposal service which services most locations. Contact customer service for more details.

Can I use your COD vials on my Hach spectrophotometer?
Yes! Every lot of our COD vials is tested using both a SPEC 21 spectrophotometer and a Hach DR 2010 spectrophotometer. All data points in each study must fall within an acceptance range of 95–105%.

I am getting inconsistent results with the same tube when I read it in the spectrophotometer.
Check the glass for any smudge marks, fingerprints, scuffs, or scratches. Any imperfections in the glass can affect the readings from the spectrophotometer.

2345A Charleston Regional Pkwy, Charleston, South Carolina 29492
843-881-6560 • 800-343-5319 • 843-881-3964 (Fax) • EnvExp.com

ENVIRONMENTAL EXPRESS®
a Cole-Parmer company

Chemical Oxygen Demand (COD) FAQs

I cannot achieve consistent results for my sample when running multiple vials. Is there a problem with the vials?
Are you getting consistent results with the standards you digest along with your samples? This is a true indicator of the performance of the COD vials. If your standards all fall within their acceptance ranges it is probably an interferent within the sample itself, such as chlorides, or you are not homogenizing your sample.

What is the source of the COD standard (B1030 or B1031)?
Potassium Hydrogen Phthalate. This standard can be used with all of our COD vials.

2345A Charleston Regional Pkwy, Charleston, South Carolina 29492
843-881-6560 • 800-343-5319 • 843-881-3964 (Fax) • EnvExp.com