Laboratory COD Analyzer

Model: COD-1C

Brief Introduction

Chemical Oxygen Demand (COD or CODcr) refers to the amount of oxidant consumed caused by oxidation of reducing substances in water under specific condition, recorded as the amount of oxygen consumption counted by “mg/L”. It indicates the water pollution degree by these reducing substances, including organic matter, nitrite, ferrous salt and sulfide, etc. There is a small amount of inorganic reducing substances but a large amount of organic matters. So, COD can be used as a comprehensive index of relative content of organic matters.

Principle

COD: Sample is sealed and digested in strong acid solution with exclusive oxidant which contains potassium dichromate, and then under special composite catalyst, digestion temperature is 165℃, last for 15 min. Hexavalent chromium in Potassium dichromate is reduced to trivalent chromium by organic matter in water. The amounts of trivalent chromium are measured at 420nm and 610nm respectively, finally, base on the amounts of trivalent chromium, calculate the consumption of oxygen concentration.

Technical Indexes

1. Measurement Range: (over range can be diluted)
   5~2000mg/L (three ranges: CODL 5~200 mg/L, CODM 200~1000 mg/L and CODH 1000~2000 mg/L)
2. Error: COD: 5~100 mg/L, Absolute Error (AE)≤±8mg/L
   100~2000mg/L； Relative Error (RE)≤±8%
3. Anti-Chlorine Interference: ≤2000mg/L
4. Max Power Consumption:300W
5. Digestion Temp.: 165℃±1.5℃
6. Digestion time: 15 min
7. Optical Systems (wavelength): 420 nm and 610 nm
8. Batch no.: 12
9. Dimensions: Main unit: 240mm×206mm×170mm
   Digester: 240mm×107mm×170mm
10. Main Unit: 7 kg