

# BOD, COD AND TDS

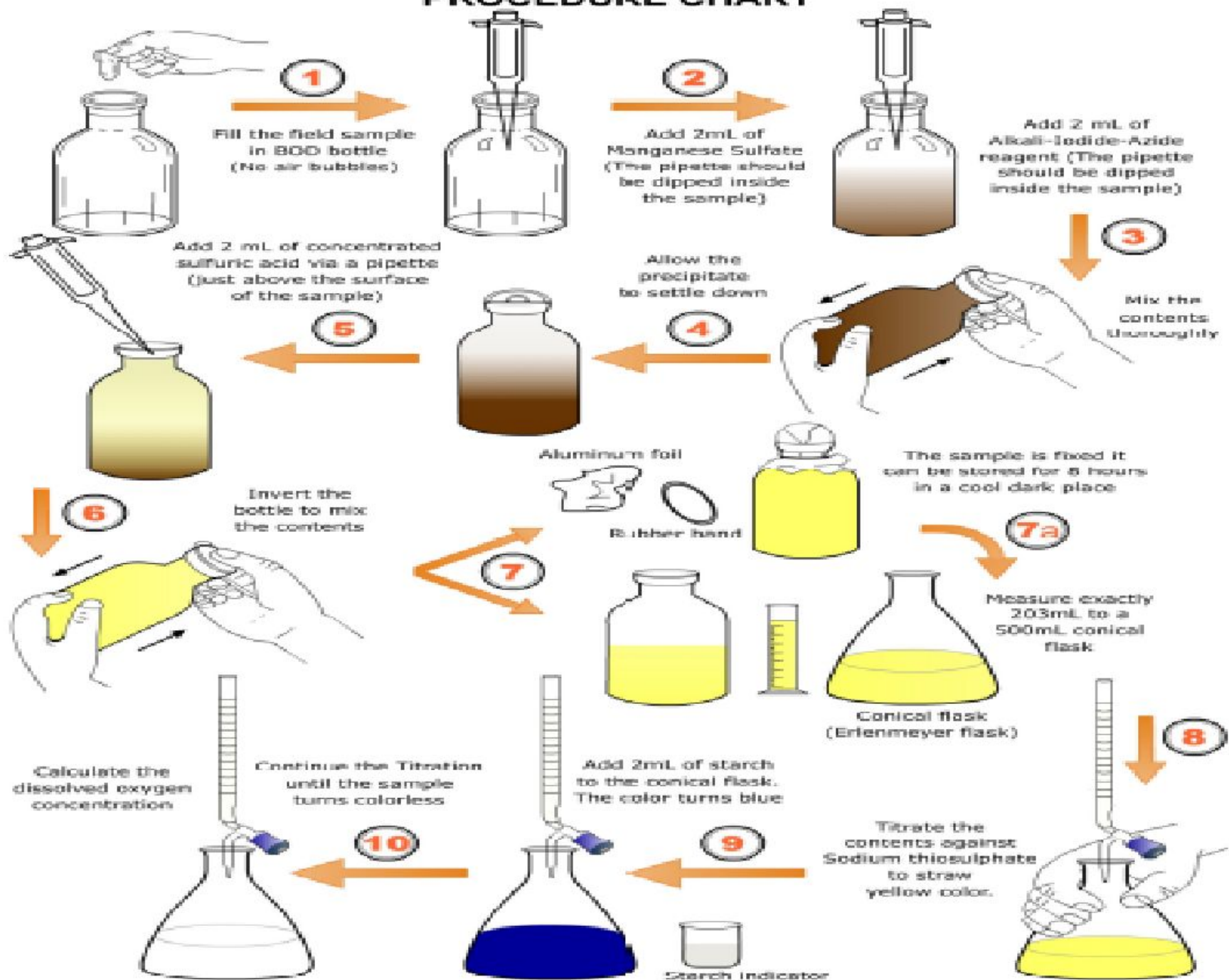


# Determination of DO

## **Dissolved Oxygen**

- Amount of **Dissolved Oxygen** (and hence available to sustain marine life) in a body of water such as a lake, river, or stream.
- DO is the most important indicator of the health of a water body and its capacity to support a balanced aquatic ecosystem of plants and animals.

# PROCEDURE CHART



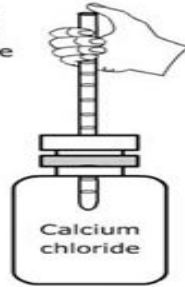
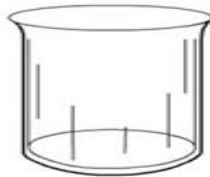
# Determination of BOD

## **Biological Oxygen Demand:**

The amount of **oxygen** required by aerobic microorganisms to decompose the organic matter in a sample of water, such as that polluted by sewage. It is used as a measure of the degree of water pollution.

## PROCEDURE CHART

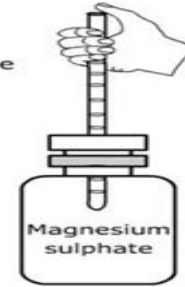
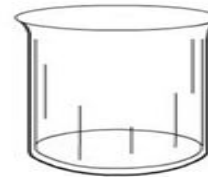
To Beaker containing  
5L dilution water add  
5mL of Calcium chloride



Calcium  
chloride

1

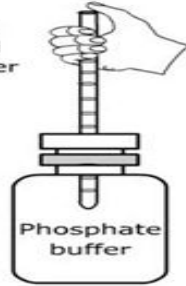
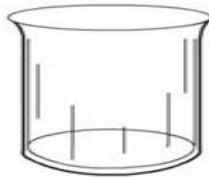
To Beaker containing  
5L dilution water add  
5mL of Magnesium sulphate



Magnesium  
sulphate

2

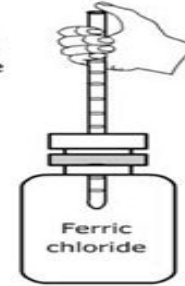
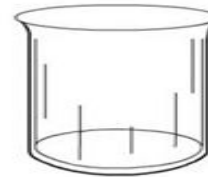
To Beaker containing  
5L dilution water add  
5mL of Phosphate buffer



Phosphate  
buffer

3

To Beaker containing  
5L dilution water add  
5mL of Ferric chloride



Ferric  
chloride

4



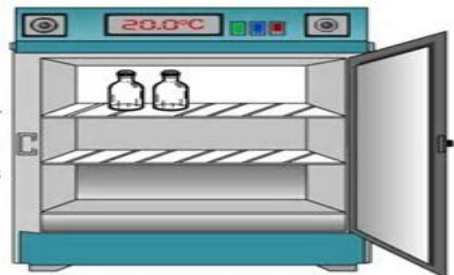
Add 30 mL of  
field sample and  
remaining 270mL  
of dilution water  
(10 times dilution)  
to 2 BOD bottles

5

Take 300mL  
of dilution water  
in 2 BOD bottles  
(blank)



Remaining  
2 BOD bottles  
of the blank and the  
sample needs to be  
kept in BOD incubator  
at 20°C for 5 days.  
After which the blank  
and the sample needs  
to be titrated  
as per the procedure  
given in DO chart.



7

Each one of the blank and the  
sample needs to be titrated  
immediately as per the procedure  
given in DO chart.

6

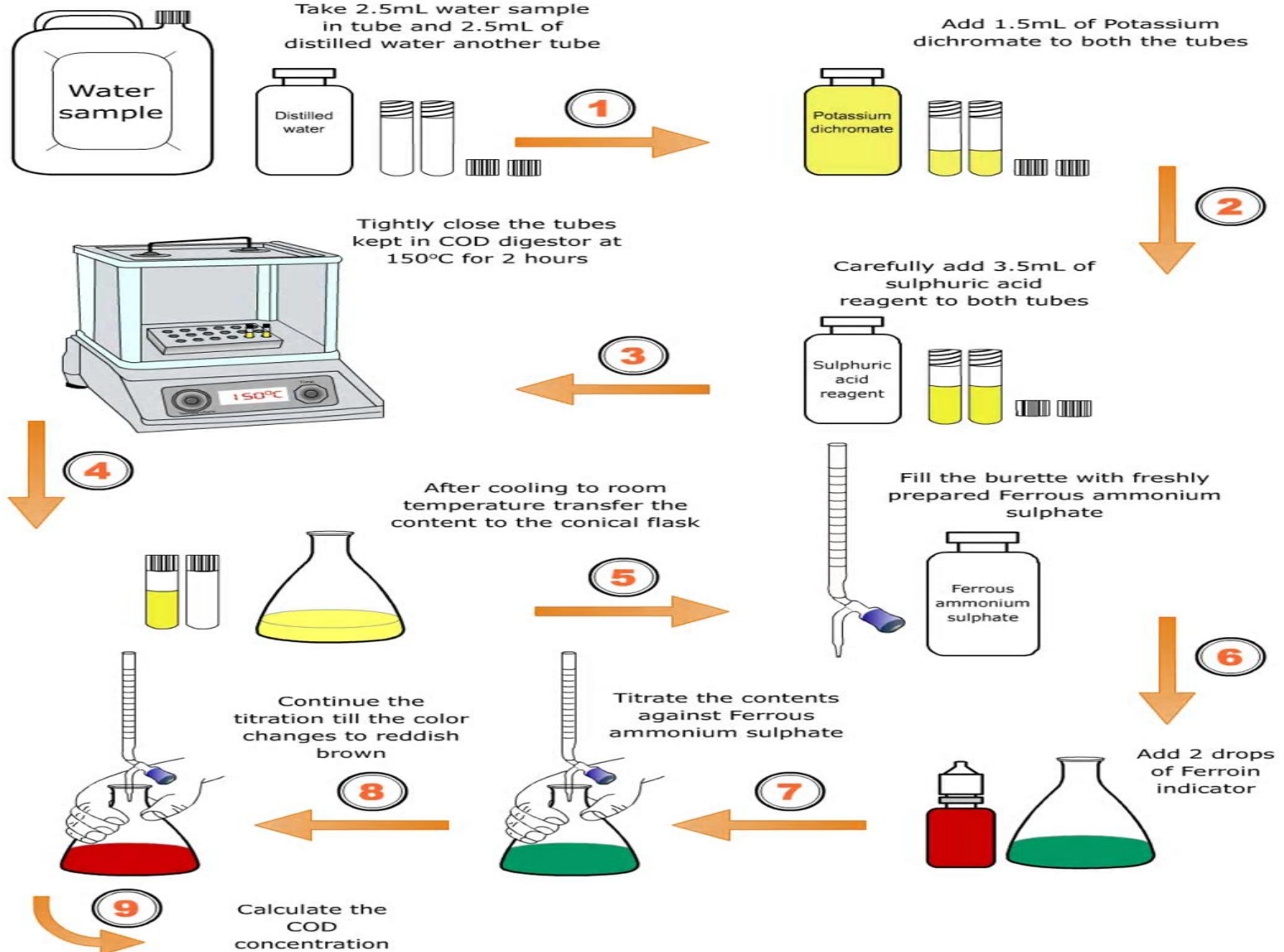
# Determination of COD

## **Chemical Oxygen Demand:**

The standard method for indirect measurement of the amount of pollution (that cannot be oxidized biologically) in a sample of water.

It is used as a measure of the degree of water pollution.

# PROCEDURE CHART



# Determination of TSS and TDS by gravimetric method

- Total Suspended Solids (TSS) is the amount of filterable solids in a water sample. Samples are filtered through a glass fiber filter. The filters are dried and weighed to determine the amount of total suspended solids in mg/l of sample.
- Total Dissolved Solids (TDS) are those solids that pass through a filter with a pore size of 2.0 micron or smaller. They are said to be non-filterable. After filtration the filtrate (liquid) is dried and the remaining residue is weighed and calculated as mg/l of Total Dissolved Solids.



## PROCEDURE CHART



## PROCEDURE CHART

