

SHORT TERM TRAINING PROGRAM

(BOILER WATER)

For last 19 years we organize training programs for sugar mills & so far more than 500 technologists have been benefited from this activity. Theory on important topics by authorities on the subject and practicals under supervision of experts is the specialty of these programs. Through these programs technologists get good idea about establishment of ideal laboratory in their mills for sugar and water testing.

Program No 1- Significance of water analysis for High Pressure Boilers in Co-generation plants

The number of sugar mills going for Co-generation is increasing day by day and therefore mills are facing problem of acute shortage of trained manpower in laboratories. The significance of accurate analysis of water is now well understood for high pressure boilers, as errors in results and wrong interpretations can lead to huge losses. In our program we have included analysis of all the parameters specified by IS: 10496 at the desired lower detection limit.(e.g. Silica at 0.02ppm)

A) Practical

- Total hardness
- pH value
- Oxygen consumption in 4h
- Silica (Higher & Lower range)
- Electrical conductance
- Phosphate
- Caustic alkalinity
- Total alkalinity
- Chloride
- Total dissolved solids
- Ammonia
- Hydrazine
- Dissolved O₂
- Turbidity

Calibration – pH meter, Spectrophotometer, Conductivity meter.

B) Theory Lectures -

- Principles of water chemistry.
- Basics in Analytical chemistry
- Boiler water problems
- Water treatment techniques
- Silt Density Index.

SHORT TERM TRAINING PROGRAM (Sugar)

Program No. 2- Quality Evaluation of White Sugar by ICUMSA Methods

In last few years Indian sugar mills have adopted new technologies and are now producing very good sugar quality. For getting premium price for this sugars factories are trying to tap the international market as well as institutional buyers. Here knowledge about the quality requirement of buyers and testing methods is very crucial. The sugar quality & food safety has become major issues due to implementation of Food safety Act. In this training programme major quality parameters and there impact on Food processing industry are covered in depth.

Program No. 2: Quality Evaluation White Sugar By ICUMSA Methods.

A) Practicals

- Colour (By GS2/3-9
- GS2/3-10 & GS9/1/2/3-8 methods)
- Colour of intermediates by method GS1/3-7
- SO₂
- Reducing Sugars
- BeverageFloc
- Dextran
- Mesophilic Bacteria
- Yeast & Mould
- Sediment
- Moisture
- Turbidity

Calibration - Spectrophotometer, pH meter, Refractometer, Conductivity meter.

B) Theory Lectures -

- Introduction to ICUMSA
- National / International / Institutional Buyer specifications of sugar
- Microbiological quality requirements
- Colour balance of the sugar processing
- Dextran: Causes & problems
- Good Laboratory Practices

C) Demonstration : Lead and Copper on AAS