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MEMBRANE FILTER COMPARISON CHARTS

Procedures

and

Test Methods

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IRON MEMBRANE COMPARISON CHART*

1.0 SCOPE

This method is applicable where a rapid determination of suspended iron is desired.

2.0 PRINCIPLE OF METHOD

The type and quantity of suspended iron present in a water sample is estimated by comparing the stain on an 0.45μ membrane filter to standard charts. (Note a).

3.0 DEFINITION

(a) Suspended Hydrate Iron Oxide = $Fe_2O_3 \bullet H_2O$.

(b) Suspended Black Iron Oxide = Fe_3O_4.

4.0 INTERFERENCES

(a) None established.

5.0 REAGENTS

(a) None required.

6.0 SOLUTION

(a) None required.

7.0 APPARATUS

(a) Hydrosol Stainless Filter Holder - available through Millipore Corporation, Bedford, Massachusetts 01730 (see Figure 1.0).

(b) Millipore Filters 0.45μ, Type HA, 47 mm - available through Millipore Corporation, Bedford, Massachusetts 01730.

(c) Water Aspirator - standard laboratory type.

8.0 CALIBRATION

(a) None required - see comparison charts.

* B&W Method

9.0 PROCEDURE

(a) Pre-wet the membrane filter with water and insert the membrane filter in position in the filter holder.

(b) Filter one liter of sample through the filter using a standard laboratory aspirator. If the suspended material is high, a smaller quantity of sample may be used.

(c) Remove the filter and dry at room temperature.

(d) Estimate the total iron by comparing the intensity of the stain with the proper comparison charts contained in this method. (Note b).

10.0 NOTES

(a) This method is not intended to be a quantitative method; however, it is an excellent, rapid, estimation of the type and quantity of suspended iron present in high purity water.

(b) If it is desired to analyze the water sample for iron, refer to ASTM D1068, Section II, Volume 11.01.

* B&W Method