

SULPHIDE METHOD 1

Using Sulphide Tablets

INTRODUCTION

The Sulphide test provides a simplified method for the determination of Total Available Sulphide in fresh water and lightly polluted effluents. The reagents are combined together in tablet form for maximum stability and convenience in practice using two tablets per test.

PRINCIPLE OF THE METHOD

Sulphides reacts with N, N-diethyl-p-phenylenediamine (DPD) and potassium dichromate together to form a blue colour which is proportional to the Sulphide concentration. In the absence of Sulphide the reagents themselves give a pink colour. Thus over the range covered the colours show a distinct difference in shade which may be measured by comparison against Lovibond permanent colour glass standards.

REAGENTS REQUIRED

1. Lovibond Sulphide No. 1 Tablets
2. Lovibond Sulphide No. 2 Tablets

THE STANDARD LOVIBOND COMPARATOR DISC 3/128

This disc covers the range 0 to 0.50mg./l. Sulphide as S in steps of 0, 0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40 and 0.50mg./l. S and is used with 13.5mm./10ml. moulded cells.

SAMPLE COLLECTION

To avoid any loss of Sulphide, collect the sample carefully with a minimum of aeration. The test colour should then be developed immediately in accordance with the technique below avoiding exposure to direct sunlight. Matching against standards may be carried out later, if more convenient, since the colours are stable for several hours.

METHOD

1. Place a 13.5mm./10ml. moulded cell, containing sample only, in the left-hand compartment of the Lovibond Comparator
2. Rinse a similar cell with the sample, and then fill to 10ml. mark. Add one Sulphide No.1 tablet and one Sulphide No.2 tablet, crush and mix *very slowly* to avoid loss of Sulphide. Continue until tablets are dissolved, then stand for ten minutes.
3. Place the cell containing the treated sample in the right-hand compartment of the Comparator and match by holding the Comparator again a standard source of white light, such as the Lovibond Daylight 2000 Unit, or failing this, North daylight (not fluorescent lighting).
4. Rotate the disc until the nearest colour match is obtained. The figure displayed in the bottom right-hand corner of the Comparator is the concentration of Sulphide as S in mg./l.

NOTE

For Sulphide concentrations higher than the maximum reading on the disc, the test can be repeated using a smaller sample volume made up to the 10ml. mark with deionised water. The resulting reading must then be multiplied by the dilution factor.

e.g. for 1ml. of sample made up to 10ml. with deionised water, multiply the disc reading by 10.

REVISION HISTORY

Date	Change Note	Issue
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