

THE DETERMINATION OF IODINE

Using Diethyl-*p*-Phenylene Diamine (DPD)

INTRODUCTION

Iodine is occasionally used in place of chlorine for the treatment of water. As the standard DPD test for chlorine also reacts with iodine, this test can be used to determine residual iodine in treated waters, provided that chlorine is not also present.

PRINCIPLE OF THE METHOD

In the presence of free iodine N, N- diethyl-*p*-phenylene diamine gives a red colour. The intensity of this colour, which is proportional to the iodine concentration, is measured by comparison with a series of Lovibond permanent glass colour standards.

REAGENT REQUIRED

Lovibond DPD No. 1 Tablets (Comparator Type)

THE STANDARD LOVIBOND COMPARATOR DISC 3/77A AND 3/77B

Lovibond Disc 3/77A covers the range 0.4 - 3.6mg./l. of iodine

Lovibond Disc 3/77B covers the range 0.7 - 14.0mg./l. of iodine

TECHNIQUE

1. Fill a 13.5mm./10ml. moulded cell to the 10ml. mark with the sample to be tested and place in the left hand compartment of the Comparator.
2. Rinse another 10ml. cell with sample. Add one DPD No.1 tablet and crush using the flat end of a clean stirring rod.
3. Fill to the 10ml. mark with sample and mix well. Place this cell in the right hand compartment of the Comparator.
4. Match the colour produced against the disc by holding the Comparator against a standard source of white light such as the Lovibond Daylight 2000 Unit or, failing this, North daylight (not fluorescent lighting). Rotate the disc until the nearest colour match is obtained.
5. The reading displayed in the bottom right hand corner of the Comparator is the concentration of Iodine in mg./l.

REVISION HISTORY

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