

HYDROGEN PEROXIDE METHOD 2

Using Hydrogen Peroxide High Range Tablets

INTRODUCTION

This simplified procedure for the determination of high levels of Hydrogen Peroxide is based on the use of Potassium Iodide in the presence of a suitable catalyst for rapid colour development. For maximum stability and convenience in practice the reagents are combined together in the form of tablets.

PRINCIPLE OF THE METHOD

Hydrogen Peroxide oxidizes Potassium Iodide in acid solution to produce Iodine. To ensure rapid and complete colour development a catalyst is incorporated into the test reagent. The intensity of the colour of the Iodine in solution is matched against Lovibond permanent colour glass standards.

REAGENTS REQUIRED

1. Lovibond Hydrogen Peroxide High Range test tablets.
2. Lovibond Acidifying PT tablets.

THE STANDARD LOVIBOND COMPARATOR DISCS 3/114 and 3/115

Disc 3/114 covers the range 2 to 20mg./l. Hydrogen Peroxide H₂O₂ in steps of 2mg./l. omitting 18.

Disc 3/115 covers the range 10 to 100mg./l. Hydrogen Peroxide H₂O₂ in steps of 10mg./l. omitting 90.

Both discs are used with 13.5mm./10ml. moulded cells.

TECHNIQUE

1. Place a 13.5mm. /10ml. moulded cell containing sample only in the left-hand compartment of the Comparator.
2. Rinse a similar cell with sample and fill to 10ml. mark. Add one Acidifying PT tablet, followed by one Hydrogen Peroxide High Range test tablet. Crush the tablets to dissolve and mix. Allow to stand for 4 minutes for complete colour development.
3. Place the cell in the right hand side of the Comparator and match the colour against the disc by holding the Comparator facing a standard source of white light, such as the Lovibond Daylight 2000 Unit, or North daylight (not fluorescent lighting).
4. Rotate the disc until the nearest colour match is found. The figure displayed in the bottom right hand corner of the Comparator gives the concentration in mg./l. of Hydrogen Peroxide present in the sample.
5. If the colour produced in the test is darker than the top standard in the disc the sample should first be diluted with Hydrogen Peroxide free or deionised water and the test repeated. The result should then be multiplied by the dilution factor.

NOTE

1. For the determination of lower levels of Hydrogen Peroxide, i.e. up to a maximum of 3mg/l, a separate method is available based on a catalysed DPD procedure. This also uses reagents in a stable tablet form.

REVISION HISTORY

Date	Change Note	Issue
15/05/02	36/460	2
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