

HYDRAZINE METHOD 2

Using *p*-Dimethylaminobenzaldehyde

INTRODUCTION

Hydrazine has been in use as an oxygen scavenger in boiler feed water for many years. It is claimed to be superior to sodium sulphite in the treatment of high pressure boilers.

PRINCIPLE OF THE METHOD

This modification of Method 1 uses a single stable reagent of *p*-dimethylaminobenzaldehyde dissolved in 0.5M sulphuric acid. This reagent reacts specifically with hydrazine to produce a yellow colour. The intensity of this colour, which is proportional to the hydrazine concentration, is measured by comparison with a series of Lovibond permanent colour glass standards.

REAGENTS REQUIRED

A 1% solution of *p*-dimethylaminobenzaldehyde in 0.5M sulphuric acid. If stored in the dark at a temperature not exceeding 25°C this reagent is stable for at least two years (Note 1). It is essential to use a specially purified grade of *p*-dimethylaminobenzaldehyde for this test.

THE STANDARD LOVIBOND COMPARATOR DISC 3/85

This disc contains standards corresponding to: 0, 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.8 and 1.0mg./l. of hydrazine (N₂H₄).

METHOD

1. Measure 5ml. of water sample (Note 2) into a 13.5mm./10ml. moulded cell, add 5ml. of the reagent and mix well.
2. Place the cell in the right hand compartment of the Comparator and place the Comparator in front of a standard source of white light, such as the Lovibond Daylight 2000 Unit or, failing this, North daylight.
3. After 2 minutes match the colour of the sample solution with the colours by rotating the disc until the nearest colour match is obtained.
4. The figure displayed in the bottom right-hand corner of the Comparator is the concentration of hydrazine in mg./l. present in the sample.

NOTES

1. To check the reagent during storage carry out the tests as described above using tap water as the sample. After shaking, the colour of the solution should not be darker than the zero standard in the disc.
2. The sample must not be tested at a temperature exceeding 21°C. An efficient cooling coil should be fitted at the sampling point or the sample must be cooled immediately under running water. Turbid samples must be filtered before the test is carried out.

REVISION HISTORY

Date	Change Note	Issue
15/5/02	36/460	2
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