

Supelco®

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MQuant®

Hydrazine Test



1. Method

Colorimetric determination with color-matching vessel

In acidic solution hydrazine reacts with 4-(dimethylamino)benzaldehyde to form a yellow compound. The hydrazine concentration is measured **semi-quantitatively** by visual comparison of the color of the measurement solution with the color zones of a color-matching vessel.

2. Measuring range and number of determinations

Measuring range / color-scale graduation	Number of determinations
0.10 - 0.25 - 0.5 - 1.0 mg/l N_2H_4	100

3. Applications

Sample material:

Boiler water and boiler feed water

4. Reagents and auxiliaries

The test reagent is stable up to the date stated on the pack when stored closed at +15 to +25 °C.

Package contents:

1 bottle of reagent Hy-1

Also required:

MQuant® Color-matching vessel Hydrazine, Cat. No. 108018 (The pack also contains a graduated 12-ml plastic syringe and a card with brief instruction.)

Other reagents:

MQuant® Universal indicator strips pH 0 - 14, Cat. No. 109535

Sodium hydroxide solution 1 mol/l Titripur®, Cat. No. 109137

Sulfuric acid 0.5 mol/l Titripur®, Cat. No. 109072

Hydrazinium sulfate GR for analysis, Cat. No. 104603

5. Preparation

- Immediately after sampling, cool the samples to approx. 20 °C.
- The pH must be within the range 2 - 10.
Adjust, if necessary, with sodium hydroxide solution or sulfuric acid.
- Filter turbid samples.

6. Procedure

Rinse the color-matching vessel several times with the pretreated sample.

Pretreated sample (10 - 35 °C)	5 ml	Fill the color-matching vessel to the lower mark (= 5 ml).
Reagent Hy-1	5 ml	Fill to the upper mark (= 10 ml) of the color-matching vessel, close the vessel with the stopper, and mix.

Leave to stand for 2 min.

Hold the color-matching vessel in front of a white background, e.g. the backside of the brief-instruction card, determine with which color zone the color of the measurement solution coincides most exactly.

Read off the result in ppm (= mg/l) N_2H_4 from the vessel.

Notes on the measurement:

- The reagent can be added directly from the bottle.
 - If the color of the measurement solution is equal to or more intense than the darkest color on the scale, repeat the measurement using **fresh**, diluted samples until a value of less than 1.0 mg/l N_2H_4 is obtained.
- Concerning the result of the analysis, the dilution must be taken into account:

Result of analysis = measurement value x dilution factor

7. Method control

To check test reagent, measurement device, and handling:

Dissolve 4.07 g of hydrazinium sulfate in oxygen-depleted (boiled) distilled water, make up to 1000 ml with this water, and mix.

N_2H_4 content: 1000 mg/l.

Dilute this standard solution with the same type of distilled water to

0.5 mg/l N_2H_4 and analyze as described in section 6.

Additional notes see under **www.qa-test-kits.com**.

8. Notes

- Reclose the reagent bottle immediately after use.
- Rinse the color-matching vessel and the syringe **with distilled water only**.
- Information on disposal can be obtained at **www.disposal-test-kits.com**.

