Supelco®

1.11131.0001

MQuant®

Magnesium Test

Mg

1. Method

Colorimetric determination with color card
Magnesium ions react with xylidyl blue (Mann and Yoe's reagent) to form a red dye. The magnesium concentration is measured **semiquantitatively** by visual comparison of the color of the measurement solution with the color fields of a color card.

2. Measuring range and number of determinations

Measuring range / color-scale graduation	Number of determinations
100 - 200 - 300 - 500 - 1000 - **1500 mg/l Mg**	50

3. Applications

Sample material:
Groundwater and surface water
Drinking water

4. Reagents and auxiliaries

Please note the warnings on the packaging materials!
The reagents in the test are stable up to the date stated on the pack when stored closed at +15 to +25 °C.

Package contents:
3 bottles of reagent Mg-1 (1 bottle with dropping pipette)
1 bottle of reagent Mg-2
2 test vessels
2 dropping pipettes
1 color card

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
Magnesium nitrate hexahydrate for analysis EMSURE®, Cat. No. 105853

5. Preparation

- **The pH must be within the range 2 - 8.**
  Adjust, if necessary, with sodium hydroxide solution or sulfuric acid.
- Filter turbid samples.

6. Procedure

Pretreated sample	1 drop	Place into one of the test vessel with a dropping pipette
Reagent Mg-1	9 drops	Add with dropping pipette and mix: **sample-reagent mixture**
Sample-reagent mixture	2 drops	Place in the second test vessel using the second, as yet unused dropping pipette.
Reagent Mg-1	approx. 5 ml	Fill second test vessel to the 5-ml mark.
Reagent Mg-2	10 drops	Add and mix.
Leave to stand for 1 min.		
Place the test vessel on the white area next to the color zones of the color card and determine with which field of the scale the color of the measurement solution - viewed from above - coincides most exactly. Read off the result in mg/l Mg from the color card.		

[1] **Hold the bottle vertically while adding the reagent!**

Notes on the measurement:

- Take care not to confuse the dropping pipettes during the determination!
- 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 1500 mg/l Mg 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 analytical test reagents and handling:
Dissolve 5.33 g magnesium nitrate hexahydrate in distilled water, make up to 1000 ml with distilled water, and mix. Mg content: 500 mg/l.
Analyze this standard solution as described in section 6.
Additional notes see under **www.qa-test-kits.com**.

8. Notes

- Reclose the reagent bottles immediately after use.
- Rinse the dropping pipettes and test vessels **with distilled water only**.
- **Information on disposal can be obtained at www.disposal-test-kits.com.**

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