1.17985.0001

MQuant™ Potassium Test

K

1. Method

Potassium ions react with dipicrylamine to form an orange-colored complex. The potassium concentration is measured **semiquantitatively** by visual comparison of the reaction zone of the test strip with the fields of a color scale.

2. Measuring range and number of determinations

Measuring range / color-scale graduation	Number of determinations
250 - 450 - 700 - 1000 - **1500** mg/l K	100

3. Applications

Sample material:
Drinking water and mineral water
Industrial water
Wastewater
Soils after appropriate sample pretreatment

4. Influence of foreign substances

This was checked in solutions with 700 and 0 mg/l K. The determination is not yet interfered with up to the concentrations of foreign substances given in the table.

Concentrations of foreign substances in mg/l					
Ag^+	1000	Fe^{2+}	1000	NO_2^-	1000
Al^{3+}	1000	Fe^{3+}	1000	NO_3^-	1000
Ba^{2+}	1000	Hg^+	200	PO_4^{3-}	1000
Ca^{2+}	1000	Li^+	500	S^{2-}	20
Cd^{2+}	1000	Mg^{2+}	1000	SO_4^{2-}	1000
Cl^-	1000	**MnO_4^-**	**1**	Zn^{2+}	1000
CN^-	1000	Na^+	1000		
Cu^{2+}	1000	NH_4^+	200		

5. Reagents and auxiliaries

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

Package contents:
Tube containing 100 test strips
1 bottle of reagent K-1
1 test vessel

Other reagents:
MColorpHast™ Universal indicator strips pH 0 - 14, Cat. No. 109535
Calcium hydroxide for analysis EMSURE®, Cat. No. 102047
Potassium nitrate for analysis EMSURE®, Cat. No. 105063

6. Preparation

- Samples containing more than 1500 mg/l K must be diluted with distilled water.
- **The pH must be within the range 5 - 14.** Adjust, if necessary, with calcium hydroxide.

7. Procedure

Immerse the reaction zone of the test strip in the pre-treated sample (**15 - 30 °C**) **for 1 sec**. Allow excess liquid to run off via the long edge of the strip onto an absorbent paper towel.		
Reagent K-1	1 drop [1]	Place on the reaction zone and allow to react **for 1 min**.
Allow excess liquid to run off via the long edge of the strip onto an absorbent paper towel and determine with which color field on the label the color of the reaction zone coincides most exactly. Read off the corresponding result in mg/l K.		

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

Notes on the measurement:

- The reaction zone of the unused strip is dark red in color. The color to be compared with the color scale does not appear until the analysis described above has been completed.
- The color of the reaction zone may continue to change after the specified reaction time has elapsed. This must not be considered in the measurement.
- If the color of the reaction zone 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 K is obtained.

  Concerning the result of the analysis, the dilution (see also section 6) must be taken into account:

Result of analysis = measurement value x dilution factor

8. Method control

To check test strips, test reagent, and handling:
Dissolve 2.59 g of potassium nitrate in distilled water, make up to 1000 ml with distilled water, and mix. K content: 1000 mg/l.
Analyze this standard solution as described in section 7.
Additional notes see under **www.qa-test-kits.com**.

9. Notes

- **Reclose** the reagent bottle and **the tube containing the test strips immediately after use**.
- Rinse the test vessel **with distilled water only**.

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