

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION

R 998 *withdrawn 1981*

POTASSIUM HYDROXIDE FOR INDUSTRIAL USE

iTeh STANDARD PREVIEW

(standards.iteh.ai)

DETERMINATION OF WATER-INSOLUBLE MATTER

ISO/R 998:1969

<https://standards.iteh.ai/catalog/standards/sist/9009327c-95da-443f-96c0-6d693a8854bc/iso-r-998-1969>

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BRIEF HISTORY

The ISO Recommendation R 998, *Potassium hydroxide for industrial use – Determination of water-insoluble matter*, was drawn up by Technical Committee ISO/TC 47, *Chemistry*, the Secretariat of which is held by the Ente Nazionale Italiano di Unificazione (UNI).

Work on this question led, in 1966, to the adoption of a Draft ISO Recommendation.

In December 1966, this Draft ISO Recommendation (No. 1107) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Austria	Israel	Spain
Belgium	Italy	Switzerland
Brazil	Japan	Thailand
Chile	Korea, Dem. P. Rep. of	Turkey
Cuba	Netherlands	U.A.R.
Czechoslovakia	New Zealand	United Kingdom
Germany	Poland	U.S.S.R.
Hungary	Portugal	Yugoslavia
India	Romania	
Ireland	South Africa, Rep. of	

Two Member Bodies opposed the approval of the Draft :

France
U.S.A.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in February 1969, to accept it as an ISO RECOMMENDATION.

POTASSIUM HYDROXIDE FOR INDUSTRIAL USE
DETERMINATION OF WATER-INSOLUBLE MATTER

1. SCOPE

This ISO Recommendation describes a method for the determination of water-insoluble matter in potassium hydroxide for industrial use.

2. FIELD OF APPLICATION

The method is applicable to the determination of water-insoluble matter content equal to or greater than 0.05 % (m/m) calculated on KOH.

3. PRINCIPLE

Dissolution of a test portion. Filtration of the solution through a tared filter crucible. Washing of the insoluble matter with water until the washings are no longer alkaline. Drying of the residue and weighing.

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4. REAGENTS

Distilled water or water of equivalent purity should be used in the test.

- 4.1 *Phenolphthalein*, 10 g/l ethanolic solution.
Dissolve 1 g of phenolphthalein in 95 % (v/v) ethanol and dilute to 100 ml with the same ethanol.

5. APPARATUS

- 5.1 *Ordinary laboratory apparatus.*
- 5.2 *Glass filter crucible*, with sintered disk of porosity between 5 and 15 μm .

6. PROCEDURE

- 6.1 **Test portion**
In a weighing bottle of approximately 100 ml, fitted with a ground glass stopper, weigh, to the nearest 0.1 g, a mass of the test sample (solid or liquid)* containing 20 ± 0.1 g of KOH.

* See ISO Recommendation R 988, *Potassium hydroxide for industrial use – Preparation and storage of test sample*, clause 2.2.

6.2 Determination

Place the test portion (6.1) in a beaker of suitable capacity (600 ml, for example). In the case of solid material, dissolve the test portion in approximately 200 ml of water; in the case of liquid material, dilute to approximately 200 ml.

Place the filter crucible (5.2) in an oven controlled at 110 ± 5 °C. After drying for 1 hour, remove it, allow to cool in a desiccator and weigh. Filter the decanted solution through the tared filter crucible (5.2), maintaining a reduced pressure by means of a filter pump or vacuum pump.

Wash any insoluble matter onto the sintered disk with water until 20 ml of the liquid flowing from the filter do not become coloured on addition of two drops of the phenolphthalein solution (4.1). Place the filter crucible containing the insoluble matter in an oven controlled at 110 ± 5 °C and dry to constant mass. Remove the filter crucible and weigh, after complete cooling in a desiccator.

7. EXPRESSION OF RESULTS

The water-insoluble matter is given as a percentage, by mass, by the following formula :

$$\frac{I}{E} \times 100$$

where

I is the mass, in grammes, of the insoluble matter filtered and dried;

E is the mass, in grammes, of the test portion.

8. TEST REPORT

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Give the following particulars :

- (a) the reference of the method used;
- (b) the results and the method of expression used;
- (c) any unusual features noted during the determination;
- (d) any operation not included in this ISO Recommendation or regarded as optional.