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Fruit and vegetable products — Determination of pH

Produits dérivés des fruits et légumes — Mesurage du pH

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Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75% of the member bodies casting a vote.

International Standard ISO 1842 was prepared by Technical Committee ISO/TC 34, *Agricultural food products*, Sub-Committee SC 3, *Fruit and vegetable products*.

This second edition cancels and replaces the first edition (ISO 1842:1975), of which its constitutes a technical revision.

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Fruit and vegetable products — Determination of pH

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1 Scope

This International Standard specifies a potentiometric method of measuring the pH of fruit and vegetable products.

2 Principle

Measurement of the potential difference between two electrodes dipped in the liquid to be tested.

3 Apparatus

Usual laboratory apparatus and, in particular, the following.

3.1 pH meter, with a scale graduated in units of 0,05 pH or, preferably, less.

If a temperature correction system is not provided, the scale shall apply to measurements at 20 °C.

3.2 Electrodes (alternative to 3.3).

3.2.1 Glass electrode

Glass electrodes of different geometrical shapes may be used. They shall be stored in water.

3.2.2 Calomel electrode, containing saturated potassium chloride solution.

Store the calomel electrode according to the instructions of the manufacturer; if these are not available, the electrode shall be stored in saturated potassium chloride solution.

3.3 Combined-electrode system (alternative to 3.2)

The calomel and glass electrodes may be assembled into a system of combined electrodes. Store this in water. The level of the saturated potassium chloride solution in the calomel electrode shall be above the water level.

4 Preparation of the test sample

4.1 Liquid products and easily filtrable products (e.g. juices, liquids from compotes or from pickles, brines, fermented liquids, etc.)

Mix the laboratory sample carefully until it is homogeneous.

4.2 Thick or semi-thick products and products from which it is difficult to separate the liquid (e.g. syrups, jams, purées, jellies, etc.)

Mix a part of the laboratory sample and grind it, if necessary, in a blender or mortar; if the product obtained is still too thick, add an equal mass of distilled water and, if necessary, mix well with a blender or mortar.

4.3 Frozen products

Thaw the product and remove stones and hard seed-cavity walls. Proceed as described in 4.1 or 4.2, as appropriate.

4.4 Dried products

Cut a part of the laboratory sample into small pieces, and remove stones and hard seed-cavity walls. Put the pieces into a beaker, add two to three times their mass of distilled water (or more if required to give a suitable consistency) and heat in a water-bath for 30 min, mixing from time to time with a glass rod. Then grind the product in a blender or mortar.

4.5 Freshly prepared products comprising distinct solid and liquid phases

Proceed as described in 4.2.