SLOVENSKI STANDARD
SIST EN 1198:1999

01-april-1999

Kemikalije, ki se uporabljajo za pripravo pitne vode – Natrijev dihidrogen fosfat

Chemicals used for treatment of water intended for human consumption - Sodium dihydrogen orthophosphate

Produkte zur Aufbereitung von Wasser für den menschlichen Gebrauch - Mononatriumdihydrogenphosphat

Produits chimiques utilisés pour le traitement de l'eau destinée a la consommation humaine - Dihydrogénophosphate de sodium

Ta slovenski standard je istoveten z: EN 1198:1997

ICS:

13.060.20	Pitna voda	Drinking water
71.100.80	Kemikalije za čiščenje vode	Chemicals for purification of water

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Descriptors: potable water, water treatment, chemical compounds, orthophosphates, description, physical properties, chemical properties, impurities, toxic substances, tests, labelling, storage, information

English version

Chemicals for treatment of water intended for human consumption - Sodium dihydrogen orthophosphate

Produits chimiques utilisés pour le traitement de l'eau destinée à la consommation humaine - Dihydrogénophosphate de sodium

Produkte zur Aufbereitung von Wasser für den menschlichen Gebrauch - Mononatriumdihydrogenphosphat

This European Standard was approved by CEN on 26 September 1997.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Contents

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 164 "Water supply" the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 1998, and conflicting national standards shall be withdrawn at the latest by March 1998.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

In respect of potential adverse effects on the quality of water intended for human consumption, caused by the product covered by this Standard :

1) This Standard provides no information as to whether the product may be used without restriction in any of the Member States of the EU or EFTA ;

2) It should be noted that, while awaiting the adoption of verifiable European criteria, existing national regulations concerning the use and/or the characteristics of this product remain in force.

1 Scope

This European standard describes the characteristics and specifies the requirements and the corresponding test methods for sodium dihydrogen orthophosphate used for treatment of water intended for human consumption. It gives information on its use in water treatment.

2 Normative references

This European standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 26595	Water quality - Determination of total arsenic - Silver diethyldithiocarbamate spectrophotometric method (ISO 6595:1982)
EN ISO 3696	Water for analytical laboratory use - Specification and test methods (ISO 3696 : 1987)
ISO 2997	Phosphoric acid for industrial use - Determination of sulphate content - Method by reduction and titrimetry
ISO 3165	Sampling of chemical products for industrial use - Safety in sampling
ISO 3360	Phosphoric acid and sodium phosphates for industrial use (including foodstuffs) - Determination of fluorine content - Alizarin complexone and lanthanum nitrate photometric method
ISO 5666-1	Water quality - Determination of total mercury by flameless atomic absorption spectrometry - Part 1 : Method after digestion with permanganate-peroxodisulfate
ISO 5961	Water quality - Determination of cadmium by atomic absorption spectrometry
ISO 6206	Chemical products for industrial use - Sampling - Vocabulary
ISO 6703-1	Water quality - Determination of cyanide - Part 1 : Determination of total cyanide

ISO 8213	Chemical products for industrial use - Sampling techniques - Solid chemical products in the form of particles varying from powders to coarse lumps
ISO 8288	Water quality - Determination of cobalt, nickel, copper, zinc, cadmium and lead - Flame atomi absorption spectrometric methods.
ISO 9174	Water quality - Determination of total chromium - Atomic absorption spectrometric methods
ISO 9965	Water quality - Determination of selenium - Atomic absorption spectrometric method (hydride technique)
ISO 11885	Water quality - Determination of 33 elements by inductively coupled plasma atomic emission spectroscopy

3 Description

3.1 Identification

3.1.1 Chemical name

Sodium dihydrogen orthophosphate.

3.1.2 Synonym or commons names

Sodium phosphate, monobasic. Monosodium phosphate.

3.1.3 Relative molecular mass

120,0.

3.1.4 Empirical formula

NaH_2PO_4.

3.1.5 Chemical formula

NaH_2PO_4.

3.1.6 CAS Registry Number [1)]

7558-80-7.

[1)] Chemical Abstracts Service Registry Number

3.1.7 EINECS reference [2)]

231-449-2.

3.2 Commercial form

Sodium dihydrogen orthophosphate is available in a number of different forms (see 3.3.1).

Different commercial forms, solids or dissolved in water are possible. All concentrations mentioned refer to the active matter and shall be calculated accordingly.

NOTE : Sodium dihydrogen orthophosphate can be a component of mixtures sold for water treatment purposes.

3.3 Physical properties

3.3.1 Appearance

Solid : White powder, granules or crystals.

Liquid : Clear solution.

3.3.2 Density

Solid : Bulk density from 900 g/dm^3 to 1 200 g/dm^3.

Liquid : 1,040 g/ml for a product concentration of 50 g/l at 20 °C.

3.3.3 Solubility in water

Approximately 850 g/l at 25 °C.

3.3.4 Vapour pressure

Not applicable.

3.3.5 Boiling point at 100 kPa [3)]

Not applicable.

3.3.6 Melting point

650 °C.

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2) European Inventory of Existing Commercial Chemical Substances
3) 100 kPa = 1 bar

3.3.7 Specific heat

Not known.

3.3.8 Viscosity (dynamic)

Solid : Not applicable.

Liquid : 5 mPa.s for a product concentration of 50 g/l.

3.3.9 Critical temperature

Not applicable.

3.3.10 Critical pressure

Not applicable.

3.3.11 Physical hardness

Not applicable.

3.4 Chemical properties

Solutions of sodium dihydrogen orthophosphate have acidic reactions.

The pH value of a solution containing 1 % (*m/m*) is approximately 4,5.

4 Purity criteria

Limits have been given for impurities and toxic substances where these are likely to be present in significant quantities from the current production process and raw materials. If a change in the production process or raw materials leads to significant quantities of other impurities or by-products being present, this shall be notified to the user.

4.1 Composition of commercial product

The product shall conform to the following requirements on a dry mass basis :

- phosphate content expressed as P_2O_5 : (59 ± 2,0) percent by mass (% (*m/m*)) ;
- sodium content expressed as Na_2O : (26 ± 1,0) percent by mass (% (*m/m*)).

4.2 Impurities and main by-products

The product shall conform to the requirements specified in table 1.