



SLOVENSKI STANDARD
SIST EN 15030:2013/kFprA1:2014
01-september-2014

Kemikalije, ki se uporabljajo za pripravo pitne vode - Srebrove soli za uporabo z občasnimi prekinitvami

Chemicals used for treatment of water intended for human consumption - Silver salts for intermittent use

Produkte zur Aufbereitung von Wasser für den menschlichen Gebrauch - Silbersalze für den nicht systematischen Gebrauch

Produits chimiques utilisés pour le traitement de l'eau destinée à la consommation humaine - Sels d'argent pour usage intermittent

Ta slovenski standard je istoveten z: EN 15030:2012/FprA1

ICS:

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

SIST EN 15030:2013/kFprA1:2014 **en,fr,de**

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

FINAL DRAFT
EN 15030:2012

FprA1

July 2014

ICS 71.100.80

English Version

Chemicals used for treatment of water intended for human consumption - Silver salts for intermittent use

Produits chimiques utilisés pour le traitement de l'eau destinée à la consommation humaine - Sels d'argent pour usage intermittent

Produkte zur Aufbereitung von Wasser für den menschlichen Gebrauch - Silbersalze für den nicht systematischen Gebrauch

This draft amendment is submitted to CEN members for unique acceptance procedure. It has been drawn up by the Technical Committee CEN/TC 164.

This draft amendment A1, if approved, will modify the European Standard EN 15030:2012. If this draft becomes an amendment, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration.

This draft amendment was established by CEN 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

	Page
Foreword.....	3
1 Modifications to the Introduction.....	4
2 Modification to the Scope	4
3 Modifications to Clause 3, Description	4
4 Modifications to Clause 4, Purity criteria	6
5 Modifications to Clause 5, Test methods.....	7
6 Modifications to Clause 6, Labelling – transportation – storage.....	8
7 Modifications to Annex A.....	9
8 Modifications to Annex B.....	10
9 Modification to the Bibliography.....	10

Foreword

This document (EN 15030:2012/FprA1:2014) has been prepared by Technical Committee CEN/TC 164 "Water supply", the secretariat of which is held by AFNOR.

This document is currently submitted to the Unique Acceptance Procedure.

EN 15030:2012/FprA1:2014 (E)**1 Modifications to the Introduction**

Replace "NOTE" with "NOTE 1" and add the following NOTE 2:

"NOTE 2 These products are used as biocides and comply with the relevant legislation in force. In the European Union, at the time of publication, this legislation is Regulation (EU) No 528/2012 [1]."

In the last sentence, add "ions" after "silver" to read:

"Water which is to be preserved with silver ions should fulfil the relevant legal requirements before the silver salt is added, in particular microbiological requirements."

2 Modification to the Scope

Add in the first paragraph, "and silver chloride" to read:

"This European Standard is applicable to silver nitrate, silver sulfate and silver chloride for the preservation of water intended for human consumption in intermittent applications in:

- water supply plants, including their pipeline networks (small-size plants);
- water for the preparation of foodstuffs;
- and other water which is stored in packaged form or kept in enclosed systems (for example, water supply systems in land, water and airborne vehicles)."

3 Modifications to Clause 3, Description

In 3.1.1, add:

"

- c) silver chloride."

In 3.1.2, replace "none" with:

"

The naturally occurring mineral is called *chlorargyrite* or *cerargyrite*, if weathered by air named as *horn silver*."

In 3.1.3, add:

"

- c) 143,23."

In 3.1.4, add:

"

- c) AgCl."

In 3.1.5, add:

"

- c) AgCl."

In 3.16, add:

"

c) 7783-90-6."

In 3.1.7, replace the title with "EINECS number" and add:

"

c) 232-033-3."

In 3.2, replace the whole paragraph with:

"The products are solids, available as powders or pelletized."

In 3.3.1, replace the whole paragraph with:

"White to slightly grey or yellowish.

NOTE Silver chloride quickly darkens on exposure to light by disintegrating into elemental chlorine and metallic silver; the latter is responsible for the colour change."

In 3.3.2, replace the whole paragraph with:

"

a) 4,35 g/cm³ (crystal density);

b) 5,45 g/cm³ (crystal density);

c) 5,56 g/cm³ (crystal density)."

In 3.3.3, replace the whole paragraph with:

"

a) 2,16 g/l;

b) 8 g/l;

c) 1,88 mg/l at 25 °C."

In 3.3.5, replace the whole paragraph with:

"

a) 444 °C (decomposition);

b) 1085 °C (decomposition);

c) 1550 °C."

In 3.3.6, replace the whole paragraph with:

"

a) 212 °C;

EN 15030:2012/FprA1:2014 (E)

- b) 652 °C;
c) 455 °C."

In 3.4, replace normal paragraphs with numbered list to read:

"

- a) silver nitrate in solution is almost neutral (the pH value of an aqueous solution at 100 g/l is approximately 6);
b) silver sulfate in solution is almost neutral (the pH value of an aqueous solution at 5 g/l is approximately 5 to 6);"

and add:

"

- c) the saturated aqueous solution (see 3.3.3) is pH neutral. Silver chloride is insoluble in alcohol, other organic solvents, dilute acids and concentrated nitric acid, but soluble in concentrated sulphuric acid and (depending on the individual concentration) in aqueous solutions of ammonia, chlorides, bromides, thiosulfates and cyanides under complexation of the silver ion.

The standard redox potential (E^0) of Ag^+/Ag in neutral aqueous solution at 25 °C is: $E^0 = +0.80 \text{ V}$.

The standard redox potential (E^0) of AgCl/Ag in neutral solution at 25 °C is: $E^0 = +0.22 \text{ V}$."

4 Modifications to Clause 4, Purity criteria

In 4.2, replace the whole subclause with:

"The content of silver salts shall not be less than a mass fraction of 99 %."

In 4.3, replace Table 1 with:

"

Table 1 — Impurities

Impurity		Limit		
		mg/kg of product		
		a) Silver nitrate	b) Silver sulfate	c) Silver chloride
Chloride (Cl ⁻)	max.	1	n.a.	n.a.
Copper (Cu)	max.	0,056	100	30
Iron (Fe)	max.	0,255	50	30
Nitrite (NO ₂ ⁻)	max.	0,5	n.a.	n.a.
Sulfate	max.	5	n.a.	n.a.
NOTE n.a. = not applicable				

"

In 4.4, replace Table 2 with:

"

Table 2 — Chemical parameters

Parameter		Limit mg/kg of product		
		a) Silver nitrate	b) Silver sulfate	c) Silver chloride
Arsenic (As)	max.	5	5	6
Cadmium (Cd)	max.	10	10	12
Chromium (Cr)	max.	10	10	12
Mercury (Hg)	max.	1	1	1,2
Nickel (Ni)	max.	10	10	12
Lead (Pb)	max.	10	10	12
Antimony (Sb)	max.	10	10	12
Selenium (Se)	max.	10	10	12

NOTE Cyanide is not relevant, since the materials used in the production process are free from it. Pesticides and polycyclic aromatic hydrocarbons are not by-products of the production process. For parametric values of trace metal content in drinking water, see [2].

"

5 Modifications to Clause 5, Test methods

In 5.2.2.3, replace the whole paragraph with:

"The metallic impurities iron and copper shall be determined in accordance with EN ISO 11885."

In 5.2.3.1.2, add the following new subclause:

"

5.2.3.1.2.2 Sodium thiosulfate solution, 10 % (m/m)".

In 5.2.3.1.3.2, replace the title with:

"Test solution for AgNO₃ and AgSO₄".

Add the following new subclause, update numbering accordingly (not tagged) and any cross references:

"

5.2.3.1.3.3 Test solution for AgCl

Add 20 ml of water and 2 ml of the sodium thiosulfate solution (5.2.3.1.2.3) dissolve and make up to the mark with water and mix."

In 5.2.3.1.3.4, (former 5.2.3.1.3.3), add a reference to 5.2.3.1.3.3 as follows:

"Determine the content of elements in the test solution (5.2.3.1.3.2 or 5.2.3.1.3.3) in accordance with the following methods:"

In the last sentence, add a reference to Formula (1) to read: