EESTI STANDARD EVS-EN 27627-6:2000

Kõvasulamid. Keemiline analüüs leekaatomiabsorptsioon-spektromeetrilisel meetodil. Osa 6: Kroomisisalduse määramine kontsentratsioonil 0,01-2% (massiprotsenti)

Hardmetals - Chemical analysis by flame atomic absorption spectrometry - Part 6: Determination of chromium in contents from 0,01 to 2 % (m/m)

EESTI STANDARDIKESKUS

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 27627-6:2000 sisaldab Euroopa standardi EN 27627-6:1993 ingliskeelset teksti.	This Estonian standard EVS-EN 27627-6:2000 consists of the English text of the European standard EN 27627-6:1993.
Standard on kinnitatud Eesti Standardikeskuse 11.01.2000 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 11.01.2000 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

ICS 77.160

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 27627-6:1993

April 1993

UDC 669.018.25:620.1:543.422:546.76

Descriptors: Powder metallurgy, hard metals, chemical analysis, determination of content, transition metals, chromium, atomic absorption spectrophotometry

English version

Hardmetals - Chemical analysis by flame atomic absorption spectrometry - Part 6: Determination of chromium in contents from 0,01 to 2 % (m/m) (ISO 7627-6:1985)

Métaux-durs - Analyse chimique par spectrométrie d'absorption atomique dans la flamme - Partie 6: Dosage du chrome à des teneurs comprises entre 0,01 et 2 % (m/m) (ISO 7627-6:1985)

Hartmetalle - Chemische Analyse durch Flammenatomabsorptionsspektrometrie - Teil 6: Bestimmung des Chromgehaltes von 0,01 bis 2 % (m/m) (ISO 7627-6:1985)

This European Standard was approved by CEN on 1993-04-02. 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.

The European Standards exist 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.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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

Foreword

In 1992 ISO 7627-6:1985 "Hardmetals - Chemical analysis by flame atomic absorption spectrometry - Part 6: Determination of chromium in contents from 0,01 to 2 % (m/m)" was submitted to the CEN Primary Questionnaire procedure.

Following the positive result of the CEN/CS Proposal ISO 7627-6:1985 was submitted to the CEN Formal Vote. The result of the Formal Vote was positive.

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 October 1993, and conflicting national standards shall be withdrawn at the latest by October 1993.

According to the Internal Regulations of CEN/CENELEC, the following countries are bound to implement this European Standard :

Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

Endorsement notice

The text of the International Standard ISO 7627-6:1985 was approved by CEN as a European Standard without any modification.

NOTE: The European references to international publications are given in annex ZA (normative).

Annex ZA (normative)
Normative references to international publications with their relevant European publications

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 (including amendments).

Publication	Year	Title	EN/HD	Year
ISO 7627-1		Hardmetals - Chemical analysis by flame atomic absorption spectormetry - Part 1: General requirements	EN 27627-1	

International Standard 7627/6

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION•МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

Hardmetals — Chemical analysis by flame atomic absorption spectrometry — Part 6 : Determination of chromium in contents from 0,01 to 2 % (*m/m*)

Métaux-durs — Analyse chimique par spectrométrie d'absorption atomique dans la flamme — Partie 6 : Dosage du chrome à des teneurs comprises entre 0,01 *et* 2 % (*m/m*)

First edition — 1985-04-01

UDC 669.018.25 : 543.422 : 546.76 **Ref. No. ISO 7627/6-1985 (E)**

Descriptors : powder metallurgy, hard metals, chemical analysis, determination of content, chromium, atomic absorption method.

Price based on 2 pages

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 7627/6 was prepared by Technical Committee ISO/TC 119, *Powder metallurgy*.

Printed in Switzerland

Hardmetals — Chemical analysis by flame atomic absorption spectrometry — Part 6 : Determination of chromium in contents from 0,01 to 2 % (*m/m*)

1 Scope and field of application

This part of ISO 7627 specifies the method to be used for the determination of the chromium content of hardmetals within the range 0,01 to 2 % (*m/m*) by flame atomic absorption spectrometry.

General requirements concerning the field of application, principle, interfering elements, apparatus, sampling and test report are given in ISO 7627/1.

2 Reference

ISO 7627/1, *Hardmetals — Chemical analysis by flame atomic absorption spectrometry — Part 1 : General requirements.*

3 Reagents

3.1 Potassium pyrosulfate.

3.2 Perchloric acid, ϱ 1,54 or 1,67 g/ml.

3.3 Ammonium citrate, solution.

Dissolve 100 g of citric acid in 1 500 ml of water and add 400 ml of ammonia solution (ϱ 0,91 g/ml).

3.4 Hydrogen peroxide, 30 % (*m/m*).

3.5 High purity stock solution, for calibration purposes, containing 1,000 g of chromium per litre.

NOTE — This value is understood to establish a maximum limit of 1,000 5 g and a minimum limit of 0,999 5 g.

4 Procedure

4.1 Test portion

Weigh, to the nearest 0,001 g, the relevant amount of the test sample indicated in table 1. Transfer it to a 100 ml conical flask (preferably of quartz).

NOTE — In this special case, the sample shall pass a 0,18 mm sieve.

4.2 Dissolution of the test portion

Add 5 g of the potassium pyrosulphate (3.1) and a few drops of the perchloric acid (3.2) to the beaker containing the test portion (4.1) and heat gently until the test portion is completely dissolved. Add 40 ml of the ammonium citrate solution (3.3), and about 0,5 ml of the hydrogen peroxide (3.4). Then transfer the solution to a 100 ml polypropylene one-mark volumetric flask and dilute to the mark.

Table 1 — Test portion, instrumental parameters and characteristics of calibration functions

Content	Test portion	Dilution volume (V) for the test portion[1]	Oxidant	Wavelength	Reciprocal sensitivity, for 1 % absorption[1]	Linear range[1]
%	g	ml		nm	µg/ml	%
0,01 to 0,1	0,500	100	N_2O	357,9	0,11	0 to 0,12
0,1 to 0,5	0,500	500	N_2O	357,9	0,11	0,1 to 0,5
0,1 to 0,5	0,100	100	N_2O	357,9	0,11	0,1 to 0,5
0,5 to 2	0,100	500	N_2O	357,9	0,11	0,4 to 2

1) Guidelines for information only.