SLOVENSKI STANDARD
oSIST prEN 16056:2010

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Vpliv kovinskih materialov na pripravo pitne vode - Metoda za ovrednotenje pasivnega vedenja nerjavnih jekel

Influence of metallic materials on water intended for human consumption - Method to evaluate the passive behaviour of stainless steels

Einfluss metallischer Werkstoffe auf Wasser für den menschlichen Gebrauch - Verfahren zur Ermittlung des Passivverhaltens von nichtrostenden Stählen

Influence des matériaux métalliques sur l'eau destinée à la consommation humaine - Méthode d'évaluation du comportement passif des aciers inoxydables

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13.060.20	Pitna voda	Drinking water
67.250	Materiali in predmeti v stiku z živili	Materials and articles in contact with foodstuffs

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English Version

Influence of metallic materials on water intended for human consumption - Method to evaluate the passive behaviour of stainless steels

Einfluss metallischer Werkstoffe auf Wasser für den menschlichen Gebrauch - Verfahren zur Ermittlung des Passivverhaltens von nichtrostenden Stählen

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 164.

If this draft becomes a European Standard, 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.

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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.

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (prEN 16056:2010) 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 CEN Enquiry.

This European Standard is one of a series of test methods which support associated product standards.

The standard has been prepared under the mandate given to CEN by the Commission of the European Communities and the European Free Trade Area and supports essential requirements of the relevant EU Directives.

With respect to the potential adverse effects on the quality of water intended for human consumption caused by metallic materials, attention is drawn to the fact that the relevant national regulations remain in force until the adoption of verifiable European acceptance criteria. Water intended for human consumption is hereafter referred to as "drinking water" and means the same as the definition given at Article 2(1) of the Council Directive 98/83/EC on the quality of water intended for human consumption.

This European Standard has been drafted in accordance with the CEN Internal Regulations, Part 3.

This European Standard is part of a series dealing with the test method to evaluate the influence of metals on drinking water:

— *Part 1: Dynamic Rig Test – Design and operation*;

— *Part 2: Dynamic Rig Test – Test waters;*

— *Part 3: Dynamic Rig Test – Guidance on interpretation of results*[1)] ;

— *Determination of residual surface lead (Pb) — Extraction method;*

— *Method to evaluate the passive behaviour of stainless steels* (this standard).

This document describes the method to evaluate the passive behaviour of stainless steels in contact with water. The passive layer is the cause for the negligible release of metal ions from stainless steels into the drinking water.

1) Not yet registered as an active project.

Introduction

The test methods in this series are designed to provide information on metal release over time from metallic materials into drinking water.

When tested in a test rig as described in EN 15664-1 stainless steels show very low metal release rates and the resulting metal concentrations in the water are in most cases below the detection limits of available analytical instruments. The reason for these small metal release rates is the formation of a passive layer on the surface of stainless steels.

It was therefore decided to test stainless steels for the properties of the passive layer and not metal release. The material under consideration is tested in an electrochemical test. For verification of the correct performance of the test protocol, the test is also performed in parallel on material 1.4404 for which the relevant data are well known.

This test is terminated when the pitting potential of the material or the break-through potential is reached.