EESTI STANDARD EVS-EN 689:1999

Töökeskkonna õhu kvaliteet. Juhised keemiliste toimeainete sissehingamise mõju hindamiseks, piirnormide toimega võrdlemiseks ja mõõtemeetodite kohta

Workplace atmospheres - Guidance for the assessment of exposure binhalation to chemical agents for comparison with limit values and measurement strategy

EESTI STANDARDIKESKUS

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 689:1999 sisaldab Euroopa standardi EN 689:1995 ingliskeelset teksti. Käesolev dokument on jõustatud 12.12.1999 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 689:1999 consists of the English text of the European standard EN 689:1995. This document is endorsed on 12.12.1999 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: Käesolev Euroopa standard annab juhiseid töökoha õhus olevate keemiliste toimeainete mõju hindamiseks. Standard kirjeldab metoodikat, mis võimaldab võrrelda töökeskkonnas leiduvate keemiliste toimeainete sissehingamisel töölistele avaldatavat mõju vastavate piirkontsentratsioonide mõjuga, ja mõõtmise planeerimist.	**Scope:**

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Võtmesõnad: keemiliste ühendite hindamine, kvaliteet, maksimaalväärtus, mõjule allumine, mõõtmine, saasteained, tööruum, õhk, õhu saastumine, õnnetuse vältimine

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Descriptors: Hazardous substances, workplaces, limit values.

English version

Workplace atmospheres

Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy

Atmosphères des lieux de travail; conseils pour l'évaluation de l'exposition aux agents chimiques aux fins de comparaison avec des valeurs limités et stratégie de mesurage

Arbeitsplatzatmosphäre; Anleitung zur Ermittlung der inhalativen Exposition gegenüber chemischen Stoffen zum Vergleich mit Grenzwerten und Meßstrategie

This European Standard was approved by CEN on 1995-02-17.

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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CEN

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

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Contents

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 137 'Assessment of workplace exposure', the Secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by August 1995 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, 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.

0 Introduction

Assessing occupational exposure to air contaminants in a representative way is a challenging task. It is necessary however to gather information, evaluate and minimize exposure to chemical agents.

Industrial processes and agents are countless. Each manufacturing stage may apply different conditions (e.g. batch production or continuous process, temperature, pressure) and agents (e.g. a wide variety of chemical substances); in each of these stages different job functions may be necessary and be subject to different exposure conditions. Distance to emission sources and physical parameters such as rates of release, air current, meteorological variations, have also a profound influence. The resulting variability of exposure conditions is made even grater by individual practices.

All this explains why rapid fluctuations in contaminant concentration or large variations over very small distances are commonplace: site, moment and duration of sampling are decisive. Some measurements on a given day or period may give an insufficient view of the actual variability of individual polluted-air exposure characteristics.

The sampling equipment often introduces its own limitations, sometimes critical, as in aerosol fractions assessments, and the analytical steps add further difficulties or uncertainties, e.g. insufficient identification or separation of chemical species, or interferences. In this complex context, sampling strategy is responsible for representativeness at the lowest possible cost.

In this variety of situations and difficulties, assessments may be undertaken with very different motives, purposes, and practices. Schemes and guidelines are offered to harmonize basic concepts and actions. In order to guarantee the quality of assessments and, if necessary, to improve work conditions, professional judgment has to be exercised.

1 Scope

This European Standard gives guidance for the assessment of exposure to chemical agents in workplace atmospheres. It describes a strategy to compare workers' exposure by inhalation with relevant limit values for chemical agents in workplace and measurement strategy.

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 482 Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents

3 Definitions

For the purpose of this European Standard the following definitions apply.

3.1 exposure: The presence of a chemical agent in the air within the breathing area of a worker. It is described in terms of concentration of the agent as derived from exposure measurements and referred to the same reference period as that used for the limit value.