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IRISH STANDARD

ENV 13800:2000

ICS 77.120.60

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Authority of Ireland
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LEAD AND LEAD ALLOYS - ANALYSIS BY FLAME ATOMIC ABSORPTION SPECTROMETRY (FAAS) OR INDUCTIVELY COUPLED PLASMA EMISSION SPECTROMETRY (ICP-ES), WITHOUT SEPARATION OF THE LEAD MATRIX

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EUROPEAN PRESTANDARD

PRÉNORME EUROPÉENNE

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ENV 13800

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English version

Lead and lead alloys - Analysis by flame atomic absorption spectrometry (FAAS) or inductively coupled plasma emission spectrometry (ICP-ES), without separation of the lead matrix

Plomb et alliages de plomb - Analyse par spectrométrie d'absorption atomique dans la flamme (FAAS) ou spectrométrie d'émission à plasma inductif couplé (ICP-ES), sans séparation de la matrice plomb

Blei und Bleilegierungen - Analyse durch Flammen - Atomabsorptionsspektrometrie (FAAS) oder Emissionsspektrometrie mit induktiv gekoppeltem Plasma (ICP-OES), ohne Abtrennung der Bleimatrix

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Foreword

This European Prestandard has been prepared by Technical Committee CEN/TC 306 "Lead and lead alloys", the secretariat of which is held by AFNOR.

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

CAUTION FOR SAFETY AND TRAINING

The methods in this standard are recommended for the certification of reference materials and as umpire methods in cases of a dispute. The importance of either application, and the paramount issue of safety, requires that they should only be carried out by fully-trained analysts who are experienced in all relevant techniques and the precautions necessary in the inherently hazardous environs of a laboratory, especially those required when using particularly hazardous apparatus and reagents used in some of these methods.

Where a particular hazard exists, this is given as a **DANGER** adjacent to the point in the text where the apparatus or reagent is referenced.

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1 Scope

This European Prestandard specifies methods of analysis using flame atomic absorption spectrometry (FAAS) and inductively coupled plasma emission spectrometry (ICP-ES) for the determination of element contents in lead and lead alloys for the ranges given in Table 1.

Table 1 — Ranges of application for the determination of element contents

Element	Ranges of application (% m/m)					
	FAAS			ICP-ES		
Ag	0,0005	-	1	0,0001	-	1
Al	0,005	-	0,04	0,0005	-	0,05
As	0,005	-	0,25	0,002	-	0,3
Ba	0,0025	-	0,025	0,0002	-	0,005
Bi	0,0025	-	0,2	0,002	-	0,2
Ca	0,001	-	0,2	0,0005	-	0,2
Cd	0,001	-	0,2	0,0001	-	0,2
Cu	0,0005	-	0,06	0,0001	-	0,06
Na	0,001	-	0,02	0,001	-	0,02
Ni	0,0005	-	0,005	0,0005	-	0,005
S		-		0,002	-	0,01
Sb	0,0025	-	10	0,002	-	10
Se	0,005	-	0,04	0,005	-	0,04
Sn	0,005	-	2	0,002	-	2
Te	0,0025	-	0,05	0,002	-	0,05
Tl	0,0025	-	0,05	0,0025	-	0,05
Zn	0,0005	-	0,01	0,0002	-	0,01

These methods are intended as the definitive methods in case of dispute for the determination of elements at low content in lead. They are also recommended for the analysis of Certified Reference Materials (CRM) and Reference Materials (RM) which are used in analysis according to ENV 12908.

2 Normative references

This European Prestandard 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 Prestandard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 12402, *Lead and lead alloys - Methods of sampling for analysis.*

ENV 12908, *Lead and lead alloys - Analysis by Optical Emission Spectrometry (OES) with spark excitation.*

ISO 648:1977, *Laboratory glassware – One-mark pipettes.*

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