भारतीयमानकब्यूरो /BUREAU OF INDIAN STANDARDS
(पूर्वीक्षेत्रीयप्रयोगशाला)/Eastern Regional Laboratory

हमारासंदर्भ/Our Ref: EROL(C)/IS 3025 Part 47 19/01/2024

विषय/ Subject: Comment on Draft document No. CHD 36/23138 F

इस संबंध में प्रस्तावित बदलाव(ओं) पर विचार करने के लिए सी.एच.डी द्वारा निम्नलिखित टिप्पणियों पर ध्यान दिया जाए:

क्र. सं. Sl. No	Clause no of IS 3025 (Part 47): 2024	**प्रस्तावितबदलाव/Proposed change**	**वजह/Justification**
5.	Cl. 1	AAS (Electrothermal Method) may be incorporated in addition to the existing method. (Method is applicable in range from 0.005 mg/l to 0.1 mg/l of Lead)	In Draft document No. CHD 36/23138 F, method involving AAS has been prescribed. The applicable detection limit/range specified in the draft document is 1.0 mg/l to 10 mg/l (AAS-Direct referred in Cl. 1a) and 0.1 mg/l to 1.0 mg/l (AAS Chelation-Extraction). Since the method is going to be referred to in IS 14543 which specifies a maximum limit of 0.01 mg/l. Hence the AAS method would not be suitable for lead detection as in IS 14543. AAS technique also involves use of electro-thermal process involving graphite furnace process (ET-AAS) in addition to flame furnace technique which has a higher level of sensitivity which will also be appropriate for detection of Lead for the range specified in IS 14543. The applicable range as per study conducted in ERL has been 0.005 mg/l to 0.1 mg/l. (please see the enclosed report). Therefore, the inclusion of the proposed methodology (ET-AAS) would be relevant for labs that don't possess ICP technique but are equipped with AAS.

Submitted for consideration of technical committee.

BiswajitGope.
Technical Assistant(Lab)

प्रभारीअधिकारी(रासायनिक)

प्रमुख (पू:क्षे:प्र:)

प्रमुख (सीएचडी)

प्रतिलिपि: **1. उपमहानिदेशक (प्रयोगशाला)**
2. प्रमुख(LPPD)
3. प्रमुख (SCMD)

Thermo SCIENTIFIC

Part of Thermo Fisher Scientific

Operator Name: Admin
Results File: C:\SOLAARM\DATA\flame trial 1.SLR

Report Date: 1/19/2024 13:17:23

General Parameters

Method : Pb tr
Operator : Admin
Instrument Mode: Furnace
Autosampler : Furnace

Analysis Details

Analysis Name: Analysis 471 1/18/2024
Spectrometer: iCE 3000 AA05204703 v1.30
Operator Name: Admin

Lamp Information

Element(s)	Serial Number	mA Hours
Pb	19380012	219

Deuterium Lamp Hours: 256.14

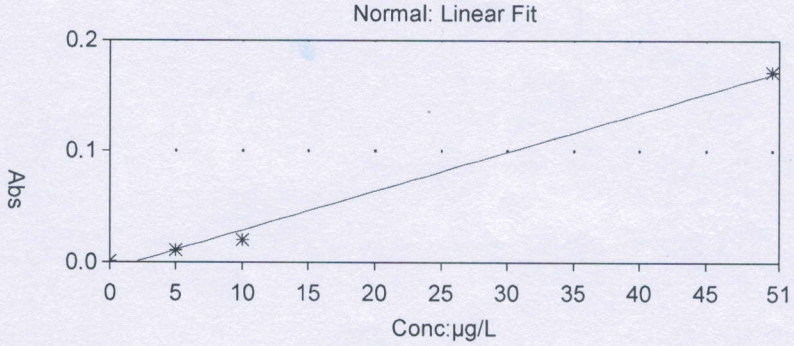
Sample Details

Nominal Mass: 1.0000

No.	Sample Id	Sample Mass	Dilution Ratio
1	Sample ID 1	1.0000	1.0000
2	10 ppb Pb	1.0000	1.0000
3	Sample ID 3	1.0000	1.0000
4	Sample ID 4	1.0000	1.0000
5	Sample ID 5	1.0000	1.0000
6	Sample ID 6	1.0000	1.0000
7	Sample ID 7	1.0000	1.0000
8	Sample ID 8	1.0000	1.0000
9	Sample ID 9	1.0000	1.0000
10	Sample ID 10	1.0000	1.0000

Solution Results - Pb

Y = 0.00352x - 0.0067
Fit: 0.9929
Characteristic Conc: 1.2505



Sample ID	Signal Abs (Height)	Rsd %	Conc µg/L	Corrected Conc µg/L
Pb Blank	0.00070	0.0	0.0000	
Pb Standard 1	0.01067	2.4	5.0000	
Pb Standard 2	0.01950	0.9	10.0000	
Pb Standard 3	0.17105	1.9	50.0000	
Pb Sample ID 1	0.00250	59.2	2.6138	2.6138
Pb 10 ppb Pb	0.03400	27.3	11.5665	11.5665
Pb Sample ID 3	0.00040	0.0	2.0170 C	2.0170 C

19.01.2024 A. Paul (LO)

19/01/24 B. GOSE (TA)

19/1/24