

## **ENVIRONMENT**

List of standards (ISO, ASTM, EN, EPA, etc.) for MGA spectrometers

Standard No	Title
ISO 5961:1994	Water quality – Determination of <b>cadmium</b> by atomic absorption spectrometry
ISO 8518:2001	Workplace air – Determination of particulate <b>lead</b> and lead compounds – Flame or electrothermal atomic absorption spectrometric method
ISO 9174:1998	Water quality – Determination of <b>chromium</b> – Atomic absorption spectrometric methods
ISO 9855:1993	Ambient air – Determination of the particulate <b>lead</b> content of aerosols collected on filters – Atomic absorption spectrometric method
ISO 11041:1996*	Workplace air – Determination of particulate arsenic and <b>arsenic</b> compounds and arsenic trioxide vapour – Method by hydride generation and atomic absorption spectrometry
ISO 11047:1998	Soil quality – Determination of <b>cadmium</b> , <b>chromium</b> , <b>cobalt</b> , <b>copper</b> , <b>lead</b> , <b>manganese</b> , <b>nickel</b> and <b>zinc</b> – Flame and electrothermal atomic absorption spectrometric methods
ISO 11174:1996	Workplace air – Determination of particulate <b>cadmium</b> and cadmium compound – Flame and electrothermal atomic absorption spectrometric method
ISO 12020:1997	Water quality – Determination of <b>aluminium</b> – Atomic absorption spectrometric methods
ISO 15586:2003	Water quality – Determination of <b>trace elements</b> using atomic absorption spectrometry with graphite furnace
ISO/TS 17073:2013	Soil quality – Determination of <b>trace elements</b> in aqua regia and nitric acid digests – Graphite furnace atomic absorption spectrometry method (GFAAS)
ISO 17211:2015	Stationary source emissions – Sampling and determination of <b>selenium</b> compounds in flue gas
ISO 17378-2:2014*	Water quality – Determination of <b>arsenic</b> and <b>antimony</b> – Part 2: Method using hydride generation atomic absorption spectrometry (HG-AAS)
ISO/TS 17379-2:2013*	Water quality – Determination of <b>selenium</b> – Part 2: Method using hydride generation atomic absorption spectrometry (HG-AAS)
ISO 20279:2005	Soil quality – Extraction of ${\it thallium}$ and determination by electrothermal atomi absorption spectrometry
ISO 20280:2007*	Soil quality – Determination of <b>arsenic</b> , <b>antimony</b> and <b>selenium</b> in aqua regia soil extracts with electrothermal or hydride-generation atomic absorption spectrometry
ASTM D858-12	Standard test methods for <b>manganese</b> in water
ASTM D1068-15	Standard test methods for <b>iron</b> in water
ASTM D1687-12	Standard test methods for <b>chromium</b> in water
ASTM D1688-12	Standard test methods for <b>copper</b> in water
ASTM D1886-14	Standard test methods for <b>nickel</b> in water

ASTM D2972-15	Standard test methods for <b>arsenic</b> in water
ASTM D3373-12	Standard test method for <b>vanadium</b> in water
ASTM D3557-12	Standard test methods for <b>cadmium</b> in water
ASTM D3558-15	Standard test methods for <b>cobalt</b> in water
ASTM D3559-15	Standard test methods for <b>lead</b> in water
ASTM D3645-15	Standard test methods for <b>beryllium</b> in water
ASTM D3859-15*	Standard test methods for <b>selenium</b> in water
ASTM D3866-12	Standard test methods for <b>silver</b> in water
ASTM D3919-15	Standard practice for measuring <b>trace elements</b> in water by graphite furnace atomic absorption spectrophotometry
ASTM D4382-12	Standard test method for <b>barium</b> in water, atomic absorption spectrophotometry, graphite furnace
ASTM D4517-15	Standard test method for low-level total <b>silica</b> in high-purity water by flameless atomic absorption spectroscopy
ASTM D6071-14	Standard test method for low level <b>sodium</b> in high purity water by graphite furnace atomic absorption spectroscopy
ASTM D6357-11	Standard test methods for determination of <b>trace elements</b> in coal, coke, and combustion residues from coal utilization processes by inductively coupled plasma atomic emission spectrometry, inductively coupled plasma mass spectrometry, and graphite furnace atomic absorption spectrometry
ASTM D6414-14*	Standard test methods for total <b>mercury</b> in coal and coal combustion residues by acid extraction or wet oxidation/cold vapor atomic absorption
ASTM D6785-13	Standard test method for determination of <b>lead</b> in workplace air using flame or graphite furnace atomic absorption spectrometry
ASTM E1613-12	Standard test method for determination of <b>lead</b> by inductively coupled plasma atomic emission spectrometry (ICP-AES), flame atomic absorption spectrometry (FAAS), or graphite furnace atomic absorption spectrometry (GFAAS) techniques
EN 1233:1996	Water quality – Determination of <b>chromium</b> – Atomic absorption spectrometric methods
EN 14902:2005	Ambient air quality – Standard method for the measurement of ${\bf Pb}$ , ${\bf Cd}$ , ${\bf As}$ and ${\bf Ni}$ in the PM10 fraction of suspended particulate matter
EN 15411:2011	Solid recovered fuels – Methods for the determination of the content of trace elements (As, Ba, Be, Cd, Co, Cr, Cu, Hg, Mo, Mn, Ni, Pb, Sb, Se, Tl, V and Zn)
EN 15841:2009	Ambient air quality – Standard method for determination of <b>arsenic</b> , <b>cadmium</b> , <b>lead</b> and <b>nickel</b> in atmospheric deposition
CEN/TS 16172:2013	Sludge, treated biowaste and soil – Determination of <b>elements</b> using graphite furnace atomic absorption spectrometry (GF-AAS)
CEN/TS 16175-1:2013*	Sludge, treated biowaste and soil – Determination of <b>mercury</b> – Part 1: Coldvapour atomic absorption spectrometry (CV-AAS)
EPA Method 30B*	Determination of <b>mercury</b> from coal-fired combustion sources using carbon sorbent traps
EPA Method 101A*	Determination of particulate and gaseous <b>mercury</b> emissions from sewage sludge incinerators
EPA Method 105*	Determination of <b>mercury</b> in wastewater treatment plant sewage sludges
EPA Method 108*	Determination of particulate and gaseous <b>arsenic</b> emissions

EPA Method 200.9	Trace <b>elements</b> by stabilized temperature graphite furnace atomic absorption spectrometry, Revision 2.2
EPA Method 231.2	Gold, atomic absorption, furnace technique
EPA Method 235.2	Iridium, atomic absorption, furnace technique
EPA Method 245.1*	<b>Mercury</b> in water by cold vapor atomic absorption spectrometry, Revision 3.0
EPA Method 252.2	Osmium, atomic absorption, furnace technique
EPA Method 253.2	Palladium, atomic absorption, furnace technique
EPA Method 255.2	Platinum, atomic absorption, furnace technique
EPA Method 265.2	Rhodium, atomic absorption, furnace technique
EPA Method 267.2	Ruthenium, atomic absorption, furnace technique
EPA Method 279.2	Thallium, atomic absorption, furnace technique
EPA Method 283.2	Titanium, atomic absorption, furnace technique
EPA Method 289.2	Zinc, atomic absorption, furnace technique
EPA Method 306	Chromium emissions electroplating/anodizing
EPA Method 0060	Determination of <b>metals</b> in stack emissions
EPA Method 7195	Chromium, hexavalent (coprecipitation)
EPA Method 7470A*	Mercury in liquid waste (manual cold-vapor technique)
APHA / AWWA / WEF Standard Method 3113	<b>Metals</b> by electrothermal atomic absorption spectrometry
APHA / AWWA / WEF Standard Method 3114B*	<b>Arsenic</b> and <b>selenium</b> by hydride generation/atomic absorption spectrometry
NIOH 6001	Arsine
NIOH 6007	Nickel carbonyl

**NIOH 7102** Beryllium and compounds, as Be

**NIOH 7105** Lead by GFAAS

**NIOH 7901** Arsenic trioxide, as As

Last update: 12/15/2016

### Lumex Instruments Canada

0890278 B.C. Ltd. Unit 207, 31510 Gill Ave., Mission, B.C., V4SOA1, Canada Toll free: +1 866-233-6057 Phone: +1 709-570-7538 E-mail:

info@lumexinstruments.com www.lumexinstruments.com

#### Lumex Analytics GmbH

Naher str., 8 24558 Wakendorf II, Germany Tel.: +49 (0) 4535 297-756 Fax: +49 (0) 4535 297-783

info@lumexanalytics.de www.lumexanalytics.de

#### Lumex-Marketing LLC

pr. Obukhovskoy Oborony, 70, bldg. 2, St. Petersburg 192029, Russia Tel.: +7 (812) 718-5390 Fax: +7 (812) 718-5399 E-mail: sales@lumex.ru Post address:

BOX 1234, St. Petersburg, 190000,

Russia www.lumex.ru

# Beijing Lumex Analytical Equipment

Room 902, Building A Zhichun Building, No.118 Zhichun Road, Haidian District, Beijing, 100086, PR China Tel.: +86 (10) 6412-9525 Fax: +86 (10) 6242-3844 E-mail: lumex@lumex.com.cn www.lumexcn.com

<sup>\*</sup> with RGP-915 hydride generation system.