



 **METAL
POWER**



About Us

From its inception in 1987 Metal Power Analytical has been at the forefront of elemental analysis solutions, pioneering innovation in Optical Emission Spectrometry (OES) and analytical solutions for industries worldwide.

What began as a focused venture into reliable metal analysis has grown into a globally recognised brand, trusted by industries in over 50 countries. Through consistent research, completely in-house development, world-class manufacturing, and a customer-first philosophy underpinning all research, applications, sales and service efforts, Metal Power Analytical has reset benchmarks in accuracy, reliability, and value—transforming the way industries approach quality assurance.



Our History and Growth

Over the past three decades, Metal Power Analytical has evolved from a trading firm into a manufacturer of comprehensive analytical solutions for elemental analysis. Strategic product launches, localised offerings, global partnerships, and a strong R&D focus have driven sustained growth, establishing the company as a trusted global leader in elemental analysis.

1987

Setting the foundation

Metal Power is established as a representation and trading entity with a focus on the metal industry.

1990

Diversification into spectrometry

Metal Power Analytical is incorporated and begins its journey in spectrometry through the agency route.

2016

Revolutionising the sector

Led the market by introducing the world's first top-end CMOS OES.

2009

Rapid growth in manufacturing

Became India's largest OES manufacturer—a position that has only strengthened since.

2004

A new vision for the future

Launched Metavision CCD based OES, becoming India's first-ever OES manufacturer.

1998

Started OES Research & Development

Kicked off in-house research and development in the domain of Spark OES.

2019

National award and pioneering innovation

Won the National Award for Innovation and became the first OES maker to deliver 1 ppm C, O, N, S, and P analysis.

2022

Grew into a multinational corporation

Established subsidiaries in the UAE and Singapore, marking the shift to a multinational company.

2023

New category of spectrometers

Launched Metavision-RX, RDE-OES for oil testing, and Metavision-MX+, a modular mobile spectrometer with an unmatched battery performance.

Who We Are Today

Metal Power Analytical is a leader in high-performance elemental analysis solutions, with:

- A diverse product portfolio serving multiple industries.
- 4,500+ clients across 50+ countries in 5 continents.
- State-of-the-art R&D, manufacturing, and service facilities.



Research & Development

Multiple patents across optics, mechanical design, and applications

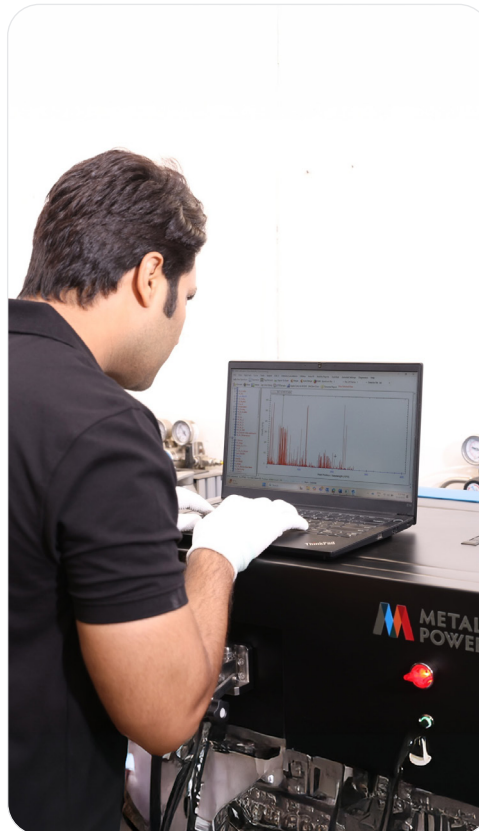
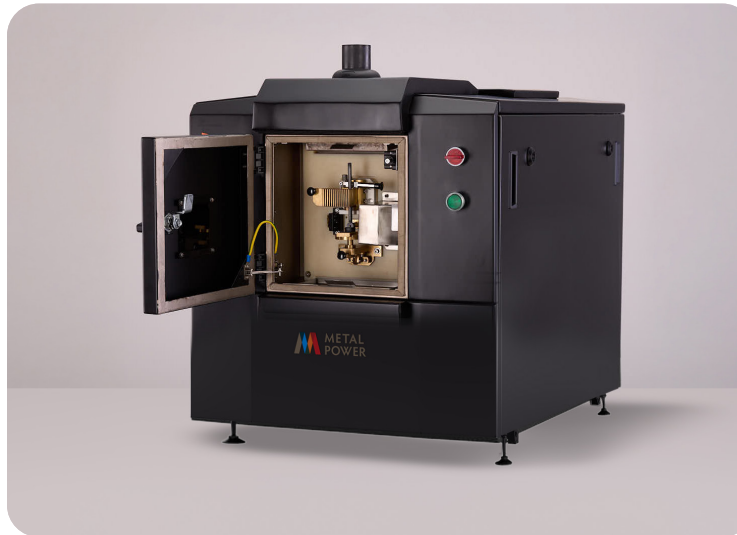
Expertise spanning both metal and oil analysis

Dedicated applications lab for customised solutions

CE-compliant across all models

Software platforms aligned with Industry 4.0

Our team of scientists and engineers combines expertise in optics, electronics, mechanical design, and software, supported by a fully equipped applications lab. This enables us to create tailored solutions—from alloy programmes to specialised analytical methods—ensuring our instruments address both industry-wide and customer-specific requirements.





Manufacturing Infrastructure

ISO 9001:2015 certified facility for effective quality management system

Integrated production facility covering end-to-end manufacturing

Advanced calibration lab and dedicated test bays

Large, controlled and dust-free environment

Quality and reliability prioritised across all products

Our manufacturing facility in Mumbai combines development, calibration, and validation within a single, integrated environment. With expansive floor space, controlled dust-free conditions, advanced equipment, a calibration laboratory, and dedicated test bays, our manufacturing facility ensures every instrument meets stringent quality standards.





Awards and Recognition

Over the years, Metal Power Analytical has been honoured with industry awards for technological innovation, product excellence, and export performance, as well as recognitions from leading industrial bodies and client organisations for service quality and contribution to manufacturing standards.



National Award 2019
for Path-Breaking Development in OES

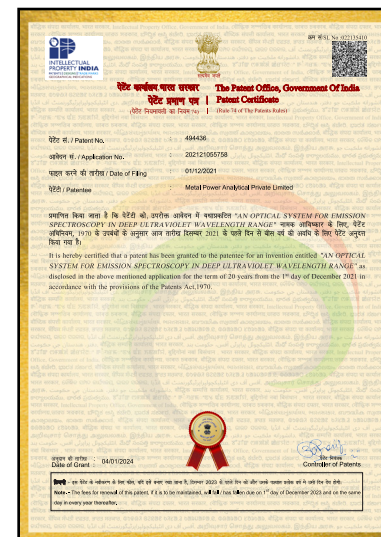
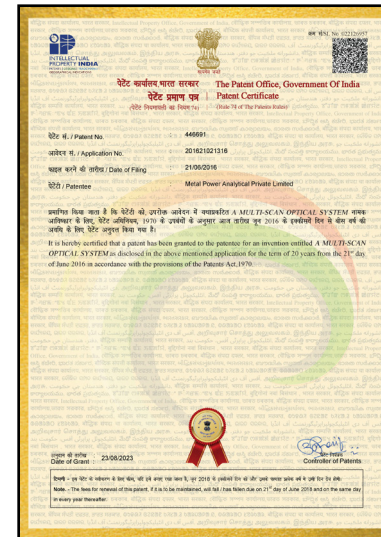


Chandran Memorial Award for Applied
Research and Innovative Technology



Rail Analysis Innovation and
Excellence Summit 2023

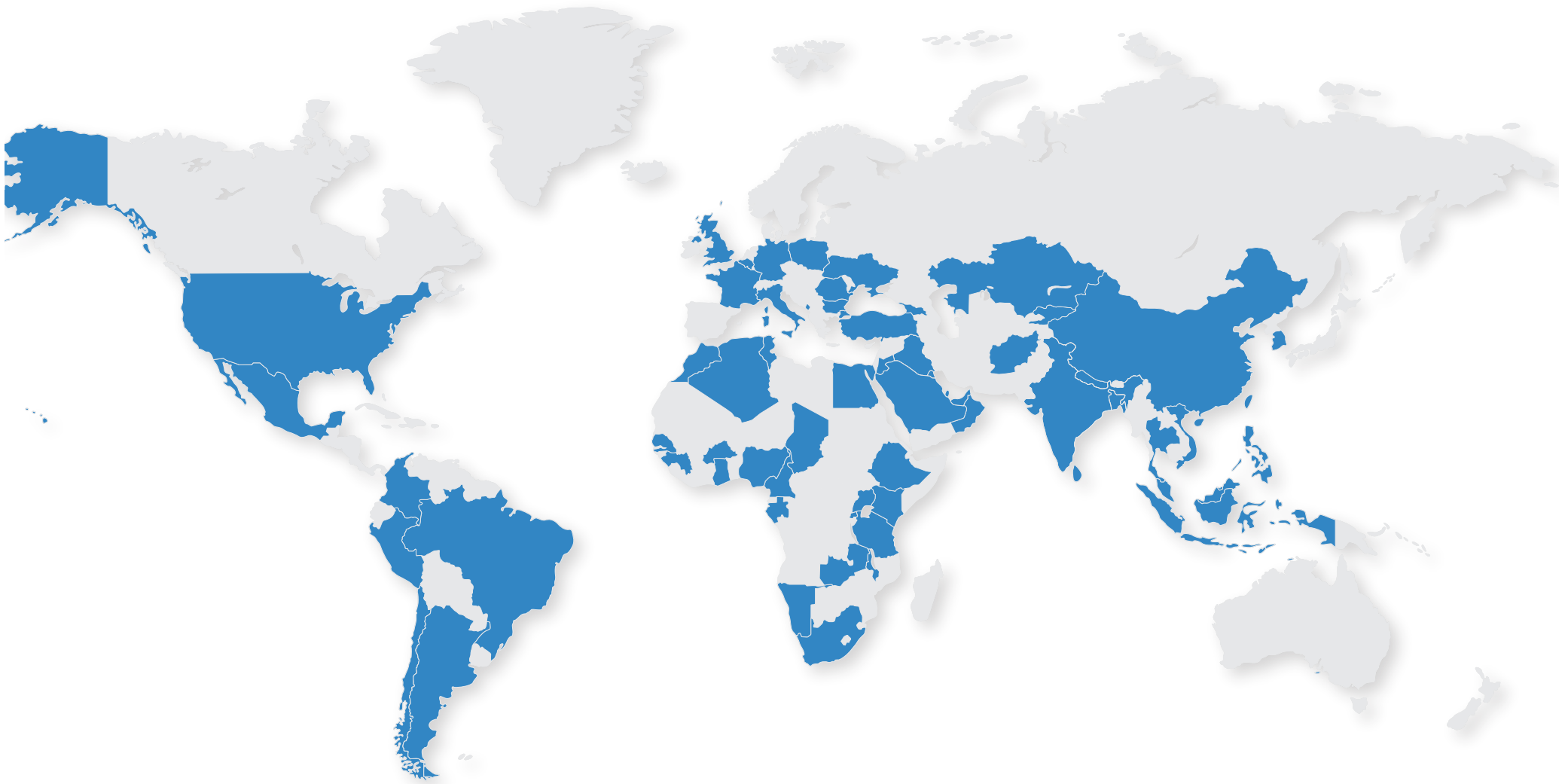
Patents





Geographical Footprint

With installations in over 50 countries, Metal Power Analytical instruments are trusted globally—from steel plants in India to automotive OEMs in South America, aerospace units in Europe, and foundries worldwide. Our network of partners ensures local expertise and responsive service across the globe.





Clientele

Metal Power Analytical serves a diverse clientele across numerous sectors and industries, including steel, aluminium, foundries, automotive, aerospace, mining, and research, among a multitude of others. Our customers range from MSMEs to global conglomerates, all united by our focus on uncompromising quality and reliability in elemental analysis.

Americas



Europe and Middle East





Asia Pacific

			 सेल SAIL	 transforming for good		
					 Tomorrow's solutions today	
			 मानक: परम्परादर्शक Bureau of Indian Standards		 बी ई एम एल Beyond Possibilities	
	 WHEELS INDIA LIMITED					
 METTLE MAKES US				 VASANTHI FOUNDRY	 Since 1960 MAHENDRA PUMPS	
	 इंजीनियरिंग का रिसर्च IGCAR A COMMITMENT TO THE SERVICE OF THE NATION				 Complete Competence in Copper	
				 RATUSARIA INNOVATING STEEL EMPOWERING LIFE	 RAMA TMT BARS ANDAR SE ATOOT	



Why Industries Trust Metal Power Analytical



Product Excellence

Our spectrometers, allied equipment, and digital solutions are engineered for unmatched accuracy and long-term stability, backed by rigorous calibration, precision optics, and advanced detection technologies.



Dual-optics
architecture



Dedicated
Deep-UV coverage



CMOS
detectors



Wide wavelength
coverage



Thermally
stabilised optics



Sub-ppm
detection limits



Digital, current-
controlled source



Exceptional stability
over time



Industry 4.0
support



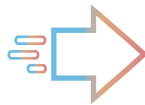


Service Assurance

From rapid-response technical support to comprehensive CARE packages, Metal Power Analytical's service infrastructure is designed to minimise downtime and ensure uninterrupted productivity.



No risk of surprise costs



Rapid response

CARE SERVICE PROGRAMS

Package**CARE**

Planned**CARE+**

Planned**CARE**



Reduce lead time and cost



Genuine parts

Package CARE



- Full coverage for parts, service, and repairs
- Predictive maintenance prevents downtime
- Highest discounts on all MPA offerings
- Includes 2 PT* registrations

Planned CARE+



- Predictable maintenance with diagnostics
- Covers operating costs and offers discounts
- Includes priority scheduling and consumable kit
- Includes 1 PT* registration

Planned CARE



- Predictable maintenance with diagnostics
- Discounts on consumables, spares, and accessories
- Priority scheduling under the plan



Class-leading accuracy and precision



Comprehensive Set of Offerings

We are one of the few global providers offering an entire ecosystem of analytical solutions, from sample preparation to elemental analysis and digital integration, ensuring seamless workflows for our clients so that they never have to compromise on quality, efficiency, and productivity.



Stationary Optical Emission Spectrometers





Metavision 10008X

Our flagship spectrometer, the Metavision-10008X, represents the pinnacle of elemental analysis technology. Designed for the most demanding applications, it delivers single- and sub-ppm detection limits across the periodic table, enabling confidence in ultra-low trace element determination.

Key Features & Benefits

- **Metal purity analysis: 99.998%+** – Trusted for critical industries requiring the highest quality assurance.
- **Analyse 60+ elements** – Broad elemental coverage with strong trace-level sensitivity.
- **Soluble-insoluble analysis** – Accurately differentiates bound and free states of elements, vital in steelmaking and advanced alloys.
- **Time-resolved Spectroscopy** – Optimised analytical parameters to improve accuracy, precision, and detection limits based on individual elements' emission characteristics.
- **Multi-stage internal argon repurification** – Guarantees consistently clean excitation conditions and reduced operating costs.
- **Hermetically sealed, cooled dual optics** – Provides unmatched stability for long-term, drift-free performance.





Metavision 1008i³

As the only OES in its class capable of accurate Oxygen analysis at low levels in steels and copper, the Metavision-1008i³ is a suitable option across all industries, providing high performance without any compromise.

Key Features & Benefits

- **Metal purity analysis: 99.995%+** – Ideal for industries where high-quality materials form the backbone of production.
- **Analyse 60+ elements down to 1 ppm** – Broad elemental coverage with strong trace-level sensitivity.
- **Oxygen analysis capability** – Oxygen analysis down to ≤ 10 ppm; essential for Copper (ETP/OFC) and all manner of high-quality steel applications (Alloy steels and Stainless Steels).
- **Soluble-insoluble analysis** – Provides acid-soluble and insoluble compliance of Al, Ti, B, and Ca in steels.
- **Argon repurification & sealed cooled optics** – Deliver improved stability, accuracy & precision as well as reduced costs.



Colour Options

Warm Grey

Cool Grey

Classic Grey

Space Grey

Matte Black



Metavision 8i

The Metavision-8i bridges affordability and high-end performance, offering dual optics and multi-base capability in a compact design. It is particularly powerful for ferrous and non-ferrous applications, supporting MSMEs and mid-sized manufacturers with accessible, world-class analysis.

Key Features & Benefits

- **Metal purity analysis: 99.98%+** – Strong assurance for wide industrial use.
- **Analyse 55+ elements down to ≤ 20 ppm** – Comprehensive analysis with low detection limits across bases.
- **CMOS optics spanning 140–620 nm** – Ensures wide coverage and adaptability across metals.
- **Noise-free spectra** – Produces clear signals even at low element concentrations.
- **Unlimited base and matrix capability** – Scales effortlessly to diverse industrial needs.
- **Dedicated Deep UV optics** – Allows accurate analysis of elements such as C, S, P, B, and N.



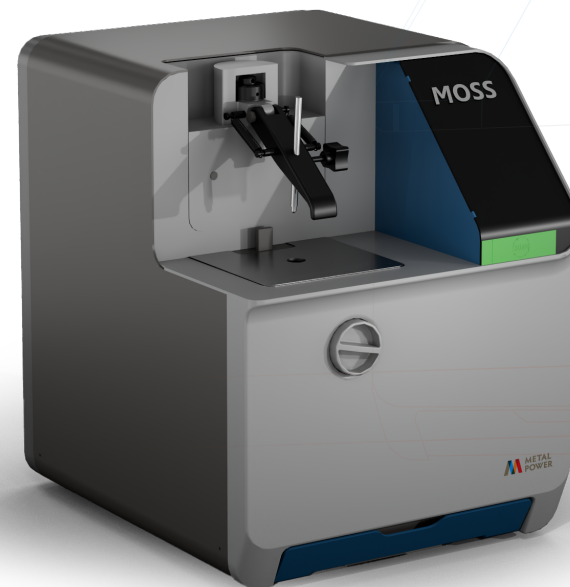


MOSS

Compact, modular, and budget-friendly, MOSS brings OES performance to entry-level users without sacrificing essential functionality. Despite its size, it retains robust accuracy, making it the best-in-class starter spectrometer for castings and small-scale operations.

Key Features & Benefits

- **Analyse 30+ elements down to 50 ppm** – Suitable for standard quality checks and compliance.
- **2,000+ burns per cylinder** – Extends productivity with low running costs.
- **Modular and scalable** – Allows growth with user requirements.
- **Smallest ever OES** – Saves space while delivering professional-grade results.

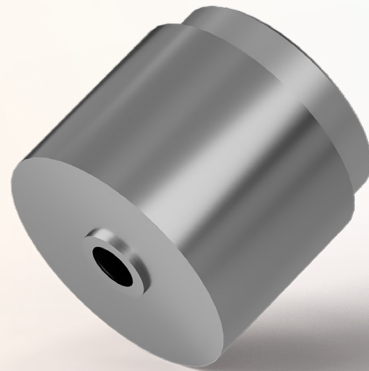




Adaptors

The Metavision stationary OES—designed for all manner of applications—features adaptors to accommodate various sample geometries. These include curved sample adaptors for pipes and cylindrical surfaces, small sample adaptors for compact samples, and wire rod adaptors for accurate analysis of thin metal wires.

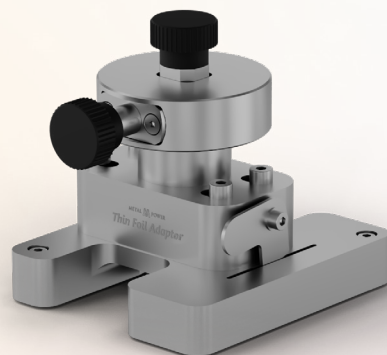
Mini samples: 4 mm to 13 mm
sample fit diameter



Wire rods: 3 mm to
13 mm diameter



Thin foils: 0.1 mm
to 1 mm thickness



Ultra-fine wires: 0.1 mm
to 3 mm diameter





Mobile Optical Emission Spectrometers





Metavision MX+

Designed for the field, Metavision-MX+ is a fully mobile OES combining portability with uncompromising accuracy. It analyses 55+ elements, including critical UV elements like C, S, P, and N, ensuring reliable PMI and advanced applications directly at site.

Key Features & Benefits

- **Rugged build** – Features a rugged, dust-resistant, and water-resistant body with a 15" touchscreen interface.
- **Global metal grade library** – Pre-installed metal grades library with 350,000+ grades across 80+ standards from 74 countries.
- **Multiple probe options** – Real-time probe display for instant decisions.
- **8-hour battery life and ultra-fast charging** – 80% battery charge in under 10 minutes.





Probes

The Metavision-MX+ and Metavision-MX are equipped with a versatile range of probes designed for specific applications, from onsite PMI to detailed analysis. Each probe combines rugged design with ease of use, ensuring reliable performance and accurate results across diverse environments.



UVis Smart Probe

Combining Spark and UV elements results in a single probe offering comprehensive analysis across elements in a single spark, eliminating the need to switch probes.



UV Probe

Low-level analyses of critical DUV elements, such as Carbon (C), Sulphur (S), Phosphorus (P), and Nitrogen (N) in an Argon atmosphere.



Spark Probe

Accurate examination of visible region elements and Carbon (C) in an Argon atmosphere.



Arc Probe

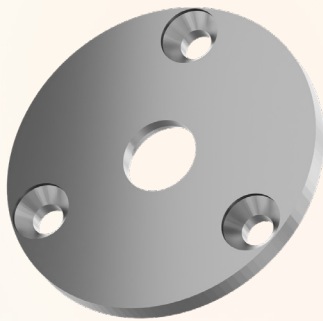
Analysis of Visible region elements and also Carbon (C) in an Air atmosphere (no requirement for an Argon bottle)



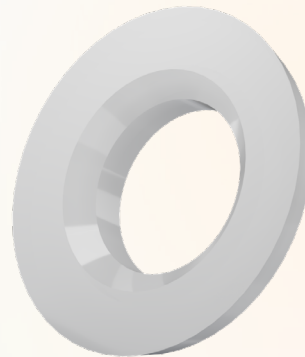
Adaptors

The Metavision-MX and Metavision-MX+ are designed for all manner of applications, featuring adaptors to accommodate various sample geometries. These include curved sample adaptors for pipes and cylindrical surfaces, small sample adaptors for compact samples, and wire rod adaptors for accurate analysis of thin metal wires.

M1 8mm Adaptor:
Base Plate with 8 mm
diameter spark hole



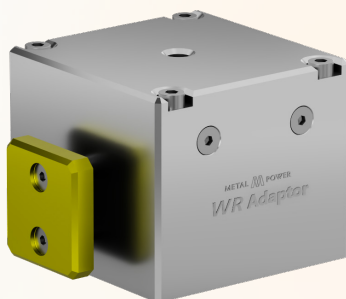
M2 Small Sample Adaptor Kit: Base
Plate with Ceramic discs from 3 mm
to 8 mm diameter



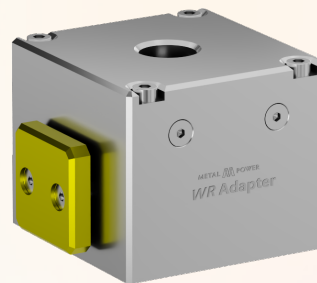
M3 Tube Adaptors (Side-on): Analysis
of tubes with diameters ranging from
10 mm to 300 mm



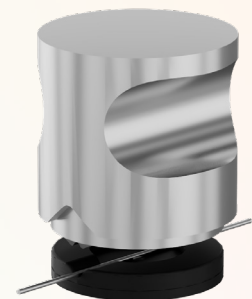
M4 Adaptor (Front-end):
Analysis of wire rods from
1 mm to 5 mm diameter



M5 Adaptor (Front-end):
Analysis of wire rods from 5 mm
to 13 mm diameter



M6 Adaptor (Side-on):
Analysis of wire rod samples
from 1mm to 10 mm diameter





Rotating Disk Electrode Optical Emission Spectrometer





Metavision **RX**

The Metavision-RX is purpose-built for oil and fluid analysis. Compact and rugged, it provides simultaneous analysis of 33+ wear metals and contaminants down to 0.1 ppm, enabling predictive maintenance and failure prevention.

Key Features & Benefits

- **ASTM D6595 & D6728 compliance** – Globally accepted accuracy.
- **Spectral coverage of 165–800 nm** – Detects a wide elemental range, including optional Sulphur analysis.
- **Ultra-high resolution CMOS optics** – Clear, interference-free spectral peaks.
- **Advanced safety features** – Safeguard the user and the instrument in a critical testing environment.





Allied Equipment





CleanSharp

CleanSharp offers a quick and safe alternative to traditional cleaning methods for electrode tips. With a durable, ergonomic design, and gap-setting functionality, it guarantees consistent performance and precision in arc/spark OES.



3in1

Designed for labs demanding high-quality sample surfaces, this machine combines grinding, turning, and electrode sharpening in a compact, efficient unit, reducing errors and improving consistency.



Wireless RTDS

WirelessRTDS enables secure, real-time transfer of spectrometer data directly to your Melt platform, with coverage of up to 1 km. Built for productivity, it supports multi-display, custom templates, and single-click transmission from lab to floor.



Armour Safe

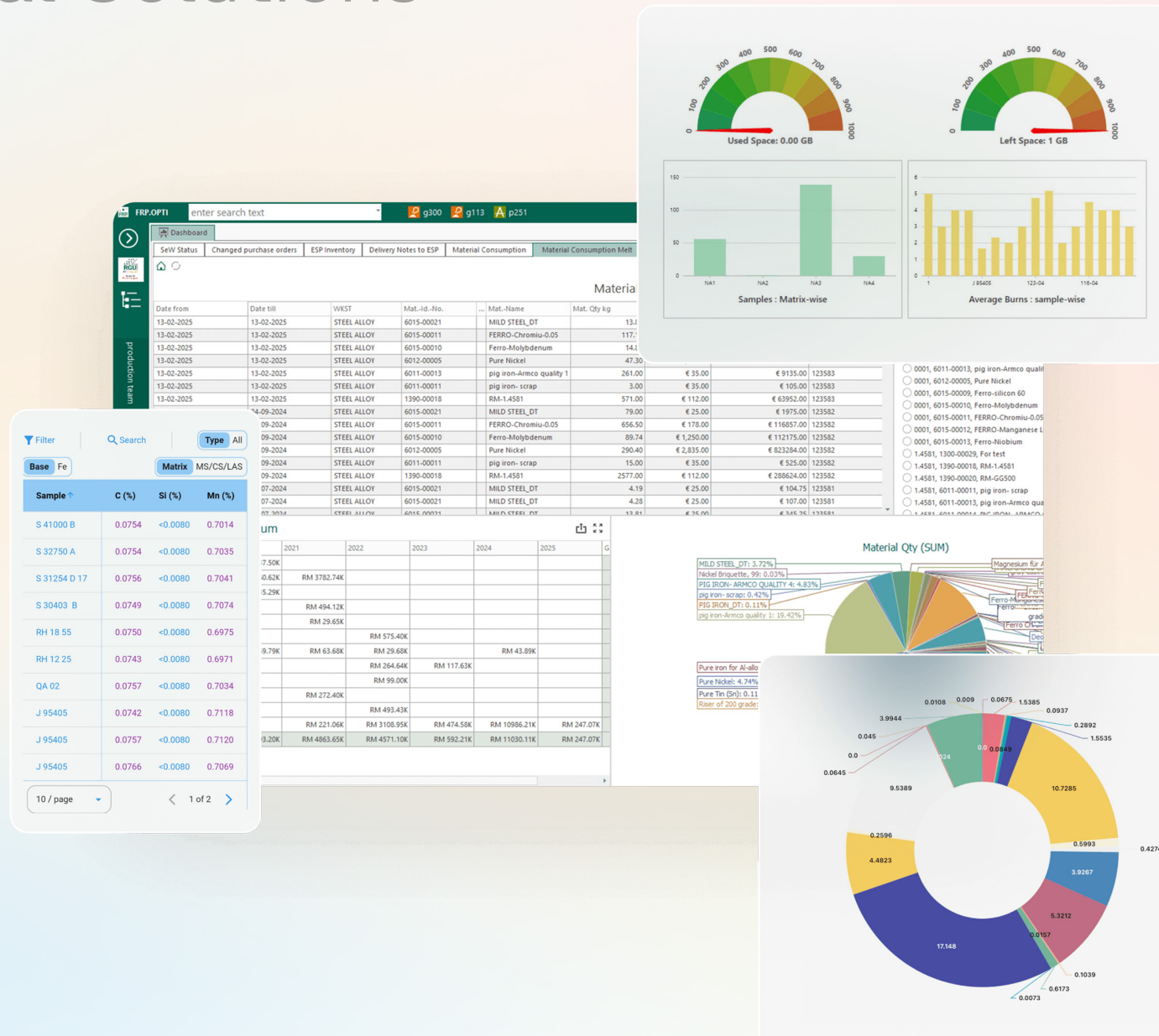
ArmourSafe instantly detects electrical anomalies and disconnects your OES system to prevent failure. With 20+ safety features, touchscreen control, and app integration, it offers peace of mind and instrument safety.





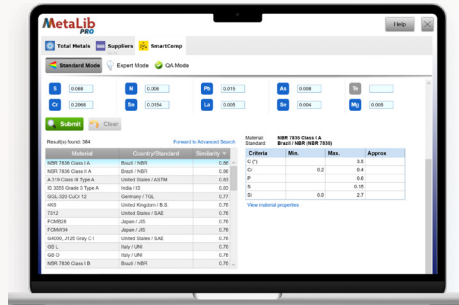
Industry 4.0

Digital Solutions





A comprehensive grade identification library that enables instant verification and classification of metal samples based on spectral data, supporting over 350,000 global grades.

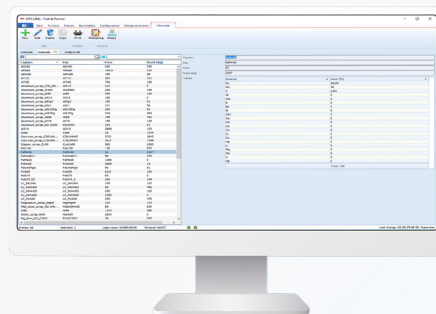


MPALabTab is a powerful mobile application designed to provide secure, real-time access to OES test data across geographies and devices, enabling users to monitor, share, and analyse results on the go.



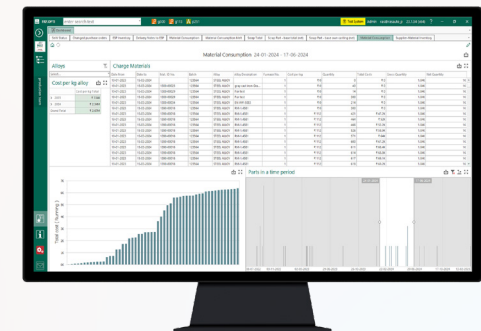
LIMS

Seamlessly enhance your lab processes with an integrated Laboratory Information Management System that ensures real-time data capture, traceability, and efficient workflow management from sample receipt to result reporting.



Charge Correction

Our OES can be integrated with a smart, automated solution for calculating the optimal metal charge mix, minimising material cost while ensuring the required composition is met with precision and speed.





What Makes Us Leaders

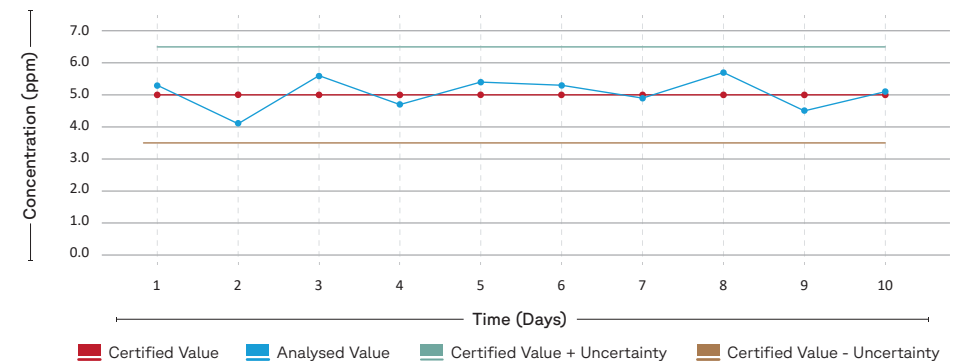
Our Optical Emission Spectrometers are built around features that directly enhance accuracy, productivity, and long-term value.

Unmatched gaseous analysis

Unique ability to accurately analyse gaseous elements like Oxygen in Steels and Copper; Nitrogen in Steels, Titanium, and Nickel; and Hydrogen in Titanium to limits as low as 1 ppm with our high-end models, among others, as well as light elements like Carbon in Cast Iron, ensuring high-performance in analysis and manufacturing.

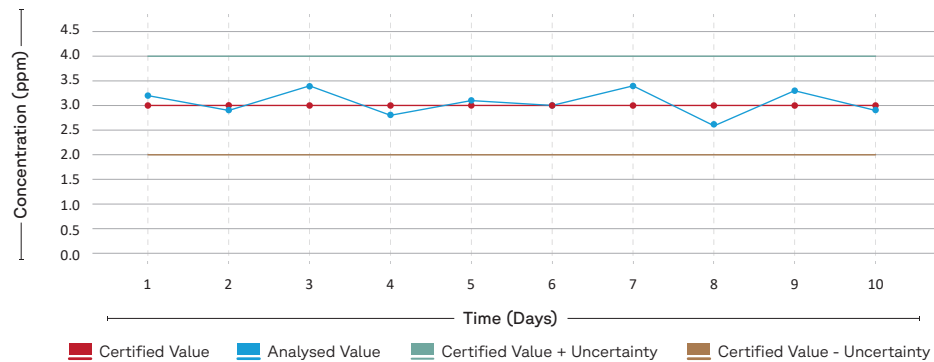
Stability Report for Oxygen in Steel

CRM ID: ARM 164A
Certified Value: 5 ppm; Uncertainty: 1.5 ppm



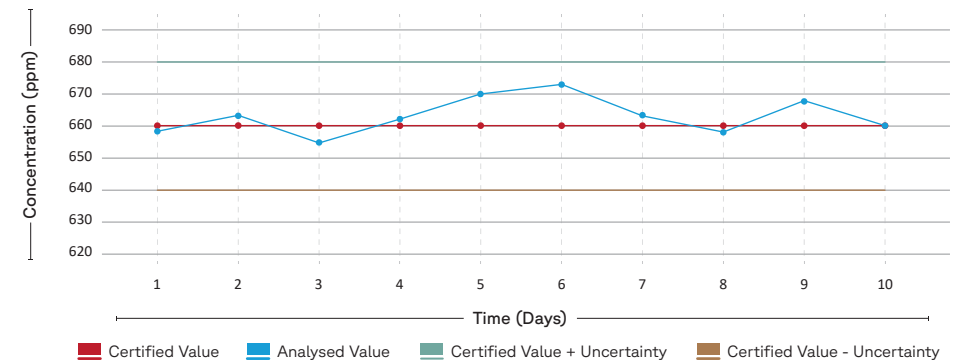
Stability Report for Nitrogen in Steel

CRM ID: IARM 164A
Certified Value: 3 ppm; Uncertainty: 1 ppm



Stability Report for Oxygen in Titanium

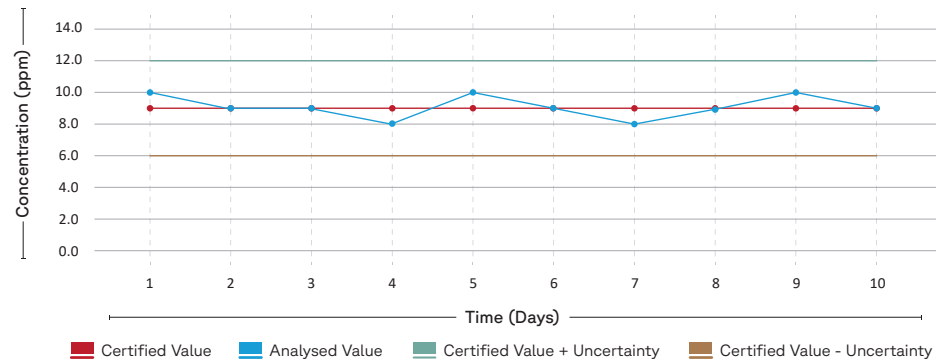
CRM ID: IARM312A
Certified Value: 660 ppm; Uncertainty: 20 ppm





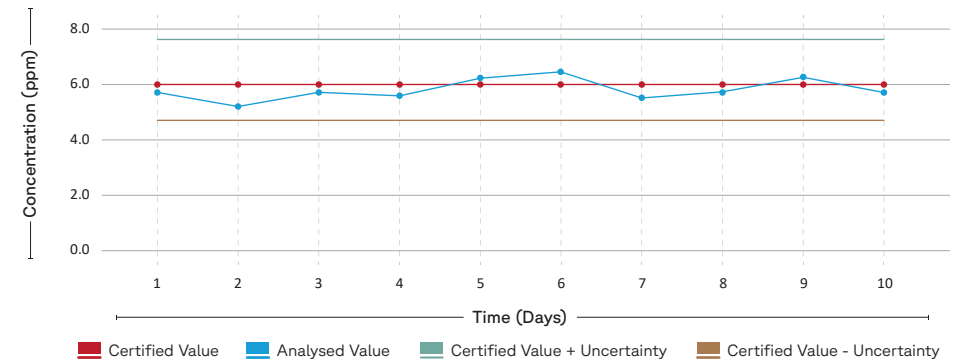
Stability Report for Oxygen in Nickel

CRM ID: IARM68C
Certified Value: 9 ppm; Uncertainty: 3 ppm



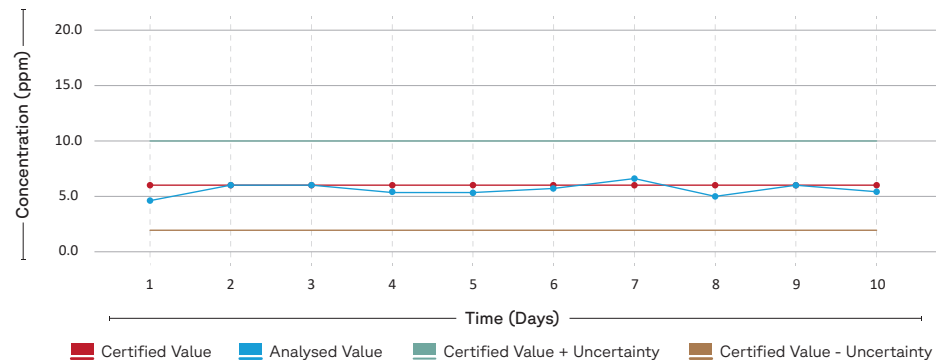
Stability Report for Oxygen in Copper

CRM ID: IARM159A
Certified Value: 6 ppm; Uncertainty: 1 ppm



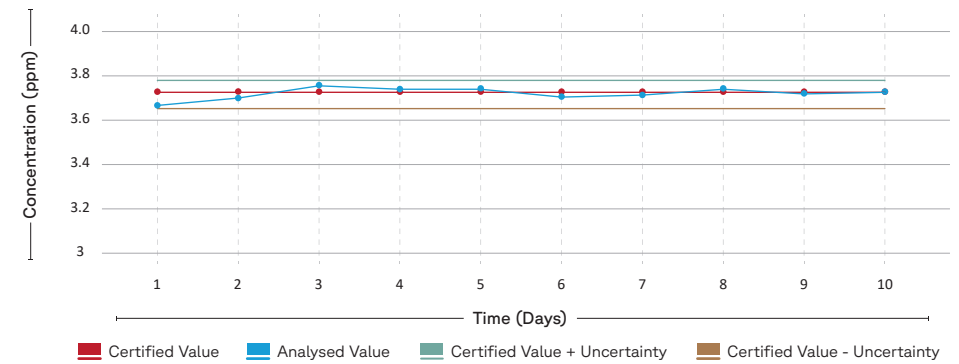
Stability Report for Hydrogen in Titanium

CRM ID: IARM 300C
Certified Value: 6 ppm; Uncertainty: 4 ppm



Stability Report for Carbon in Cast Iron

CRM ID: 668/13
Certified Value: 3.72%; Uncertainty: 0.06%





Soluble-Insoluble Analysis

Differentiates element states critical for steelmaking, improving quality control and reducing failures by providing acid-soluble and insoluble compliance of Al, Ti, B, and Ca in steels.

The Analyst 10.1.0.0_CDT: 3/7/2025 5:58:58 PM

Start Burn Stop Burn Delete Burn Load Spectrum Exclude Burn Save Spectrum Finish Analysis Customize Element Sample Details Compare Grades Specs Type Metalib Type Metalib Basic Search Grades Print Preview Export Excel Export PDF Dynamic Analysis Horizontal Element Concentrations

Fe Cr-Ni Steels-Sol-InSol Type Production Sample Name SS316 Heat Number Grade Hide Customer

Elements	C (%)	Si (%)	Mn (%)	P (%)	S (%)	Cr (%)	Mo (%)	Ni (%)	Cu (%)	Al (%)	As (%)	B (%)	Co (%)	Nb (%)
Burn1	0.014	0.548	1.45	0.028	0.026	16.80	2.10	10.03	0.439	0.0047	0.0067	0.0020	0.126	0.012
Burn2	0.016	0.552	1.47	0.030	0.026	16.77	2.10	10.10	0.432	0.0046	0.0067	0.0019	0.126	0.011
Burn3	0.015	0.550	1.46	0.029	0.026	16.79	2.10	10.09	0.437	0.0048	0.0067	0.0019	0.126	0.011
Mean	0.015	0.550	1.46	0.029	0.026	16.79	2.10	10.07	0.436	0.0047	0.0067	0.0019	0.126	0.011
SD	0.0010	0.0020	0.010	0.0010	-	0.016	-	0.038	0.0036	0.00010	-	0.00007	-	0.0007

Elements	Pb (%)	Sn (%)	Ti (%)	V (%)	W (%)	Zn (%)	Ce (%)	N (%)	Sb (%)	Ca (%)	Bi (%)	O (%)	Fe (%)	Al Sol (%)
Burn1	0.0021	0.0094	0.013	0.060	0.042	<0.0005	<0.0005	0.060	<0.0020	0.0018	<0.0050	0.0056	68.20	0.0044
Burn2	0.0023	0.0090	0.013	0.066	0.047	<0.0005	<0.0005	0.063	<0.0020	0.0015	<0.0050	0.0054	68.13	0.0042
Burn3	0.0022	0.0092	0.011	0.062	0.045	<0.0005	<0.0005	0.061	<0.0020	0.0018	<0.0050	0.0055	68.14	0.0044
Mean	0.0022	0.0092	0.012	0.063	0.045	<0.0005	<0.0005	0.061	<0.0020	0.0017	<0.0050	0.0055	68.15	0.0043
SD	0.0001	0.0002	0.0012	0.0031	0.0025	-	-	0.0016	-	0.0002	-	0.00010	0.039	0.0001

Elements	Al InSol (%)	Ti Sol (%)	Ti InSol (%)	Ca Sol (%)	Ca InSol (%)	B Sol (%)	B InSol (%)
Burn1	0.0003	0.013	0.0003	0.0018	0.0003	0.0020	0.00002
Burn2	0.0004	0.012	0.0008	0.0014	0.0001	0.0017	0.0002
Burn3	0.0004	0.010	0.0005	0.0017	0.00009	0.0018	0.0001
Mean	0.0004	0.012	0.0006	0.0016	0.00008	0.0018	0.0001
SD	0.00005	0.0012	0.0002	0.0002	0.00005	0.0001	0.00008

Burn Counter :251

Image 1 : Analysis of ultra pure Aluminium CRM

Soluble-Insoluble Analysis

CRM	Certified			Burn 1			Burn 2			Burn 3		
	Al (Total)	Al Sol	Al Insol	Al (Total)	Al Sol	Al Insol	Al (Total)	Al Sol	Al Insol	Al (Total)	Al Sol	Al Insol
22-c	0.095	0.092	0.003	0.0965	0.094	0.0025	0.0954	0.093	0.0024	0.0972	0.094	0.0032
23-c	0.0453	0.045	0.0003	0.0432	0.043	0.0002	0.0464	0.046	0.0004	0.0434	0.043	0.0004
24-c	0.023	0.021	0.002	0.0242	0.022	0.0022	0.0236	0.022	0.0016	0.0215	0.02	0.0015
25-d	0.002	0.001	0.001	0.0022	0.0009	0.0013	0.0022	0.0011	0.0011	0.0021	0.0012	0.0009
26-c	0.006	0.004	0.002	0.0054	0.0038	0.0016	0.0059	0.0041	0.0018	0.0059	0.0043	0.0016
27-c	0.018	0.016	0.002	0.0177	0.0163	0.0014	0.0179	0.0161	0.0018	0.0173	0.0155	0.0018

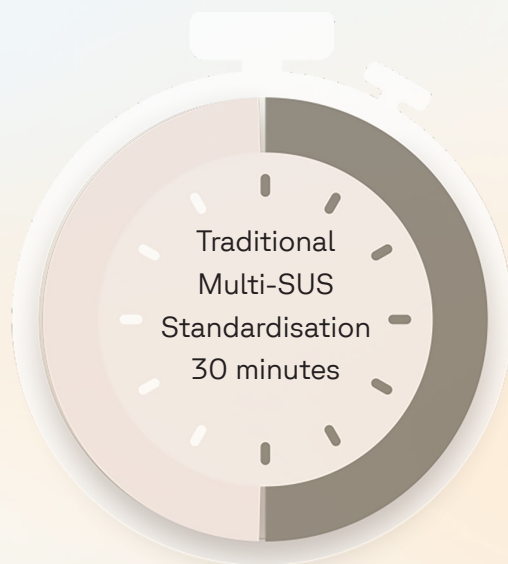
Table 1: Analysis of Soluble-Insoluble Certified Reference Material in Stainless Steel



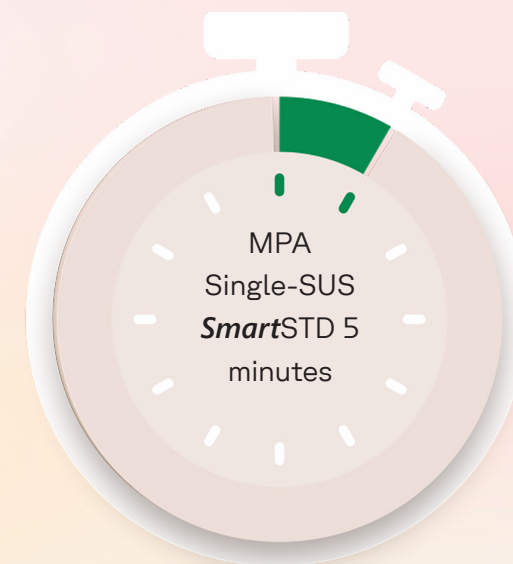
SmartSTD (Standardisation Technology)

Minimises standardisation/recalibration time to just 5 minutes, ensuring stable, accurate results with minimal downtime.

SmartSTD comes accompanied with in-built intelligence to identify the optimal burn quality, eliminating the risk of operator errors, delivering a process that is not merely accurate, fast, and economical, but also user-friendly.



Traditional multi-point standardisation/recalibration methods require about 30 minutes across multiple samples, resulting in delays, higher costs, and loss of productivity.



MPA's **SmartSTD** uses just a single sample for the standardisation/recalibration process and delivers a productivity upside of ~85%, along with substantial cost savings.

Hermetically sealed cooled optics

Ensures thermal stability and minimises drift over an extended period of operation.

Current-controlled plasma source

Provides reproducible, stable sparks that directly improve accuracy.

Multi-stage Argon repurification

Reduces gas costs while maintaining consistently clean plasma conditions.



A Company Driven by a Firm Commitment to Holistic Excellence

At the core of Metal Power Analytical's operations are our values—accuracy, reliability, innovation, and customer focus. Every decision, every product, and every interaction is guided by these principles, ensuring that we deliver not just instruments, but long-term value and trust to our customers worldwide.

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