

A worker wearing a dark protective suit, a helmet with a clear face shield, and heavy gloves is using a long metal rod to interact with a bright, glowing molten metal sample. The scene is set in an industrial environment with dark structural elements.

**ThermoFisher**  
SCIENTIFIC

Optical emission spectrometers

# Thermo Scientific optical emission spectrometers

For chemical analysis of solid metallic samples

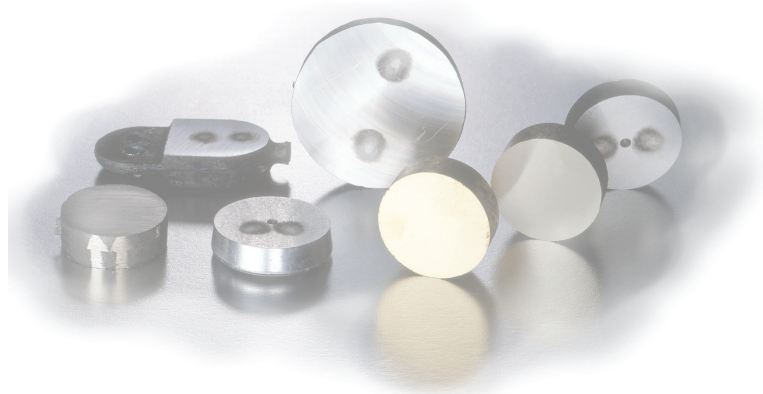
thermo scientific

# Unrivaled reputation in OES

For more than 85 years, our company has set the standard for elemental analysis of solid metal samples with continuous innovations and regular firsts in optical emission spectrometers.

Our optical emission spectrometers come with turn-key analytical solutions allowing fast and simultaneous determination of all the relevant elements in many metals and alloys. Analyzing with accuracy and precision from trace to percent element concentration levels, our instruments reliability fulfill all the analytical tasks required by metallurgical industries and analysis laboratories.

The unrivaled reputation of Thermo Fisher Scientific in metals analysis comes from our extremely large installed base of OES spectrometers and the key benefits that they provide, day after day, year after year, to their users.



## Benchtop OES spectrometer

The Thermo Scientific™ ARL™ easySpark optical emission spectrometer brings all the features and benefits sought-after by small and medium size foundries, metal processors and other metallurgical industries and laboratories that want to maximize productivity with reliable metals analysis.

### Thermo Scientific ARL easySpark

- Compact and affordable CCD spectrometer
- High performance Peltier-cooled CCD spectrometer
- Wide elemental coverage including N in steel and Li and Na in aluminum
- Excellent accuracy, precision and stability
- Easy to use for manager and operator with easyOXAS software
- Open stand design offering high user safety
- Low cost of ownership



# High performance OES spectrometer

## Thermo Scientific ARL iSpark Plus series

The Thermo Scientific™ ARL iSpark™ Plus series combines experience and innovation. Designed around the world's most famous PMT optics of the ARL 3460 and ARL 4460 spectrometers, it combines well proven technologies with increased functionality and many innovative features:

- Paschen-Runge mounting with 1m focal length for optimal intrinsic optical resolution
- Heavy cast iron spectrometer body operating under vacuum and temperature controlled for ultimate stability
- Advanced acquisition and processing technologies ensuring highest performance for all elements
- Simple stand design allowing easy and fast routine maintenance
- Significant argon savings during analysis and in stand-by

The ARL iSpark Plus series addresses the requirements of all metallurgy markets and offers an optimum solution for those requiring utmost analytical excellence.

### Thermo Scientific ARL iSpark 8820 Plus

- Custom designed optical configurations with wide range of elements
- Excellent accuracy, sensitivity, precision and stability
- Economical solution for highly reliable process and quality control
- Ideal for demanding foundries and metal processors



### Thermo Scientific ARL iSpark 8860 Plus

- Customizable optical configuration and range of elements
- Analysis of all types of metals and alloys, pure and ultra-pure included
- Outstanding sensitivity, accuracy, precision and stability
- Ultimate performance for trace elements
- Determination of ultra-low concentration C, N and O in steels
- Ultra-fast analysis of non-metallic inclusions
- Instrument of choice for metals producers and refiners



## Fire assay analysis

The ARL iSpark Plus Fire Assay Analyzer is a member of our high performance OES spectrometers family. It is used to determine the concentrations of the precious metals directly in lead buttons, providing numerous advantages compared to traditional fire assay analysis techniques, especially simplifying and speeding up the process by eliminating the cupellation and complex subsequent analytical methods.

### Thermo Scientific™ ARL iSpark Plus Fire Assay Analyzer

- Highly quantitative determination of precious metal at trace concentration in fire assay lead buttons
- Outstanding sensitivity, precision, accuracy, stability and reliability
- Considerable time and cost savings by suppressing cupellation and traditional analyses
- Makes fire assay analysis simpler, cleaner and less polluting



### Thermo Scientific™ ARL™ iSpark Plus Inclusion Analyzer

- Allows ultra-fast determination of elemental concentrations and characterization of non-metallic inclusions in a single analysis
- Designed to meet the most demanding needs of both elemental and inclusion analyses of steel samples
- Includes all our best features for ultra-fast inclusion analysis, namely customized methods, software tools, and training of operators and managers



## Automation systems for ARL iSpark Plus

Automation improves sample analysis dependability and quality by eliminating many of the causes of measurement errors (i.e., human variables). Shorter and predictable response times lead to major production savings. Fast and precise results allow you to meet tighter product specifications and analysis time expectations without increasing overhead costs. The series of SMS automation systems span the entire metals industry spectrum from foundries and metals processors to modern steel works and large aluminum smelters.

### Thermo Scientific™ ARL™ SMS-2300, SMS-2500 and SMS-3500 robotized systems

- Ultimate sample handling flexibility and speed for the automated Thermo Scientific ARL iSpark Plus OE spectrometer with ARL SMS-2300/2500
- Two X-ray or two OES, or one X-Ray and one OES instruments can be automated with the ARL SMS-3500 Series, including one or two sample preparation machines



ARL SMS-3500 with 2 ARL iSpark in parallel

For unattended on-site analyzes, these systems can be supplied in a standard container: the Thermo Scientific™ ARL™ QuantoShelter, also called “the lab in a box.”

Learn more at [thermofisher.com/isparkplus](https://thermofisher.com/isparkplus)

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