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ASPHIRE SPECTRO

ACCURATE ■ PROFICIENT ■ CREDIBLE

An ISO 9001:2015

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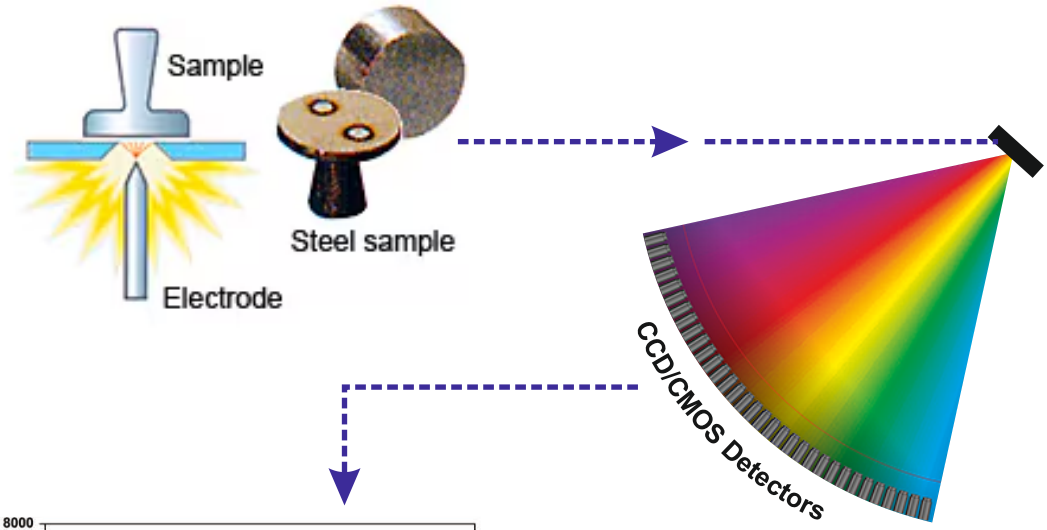
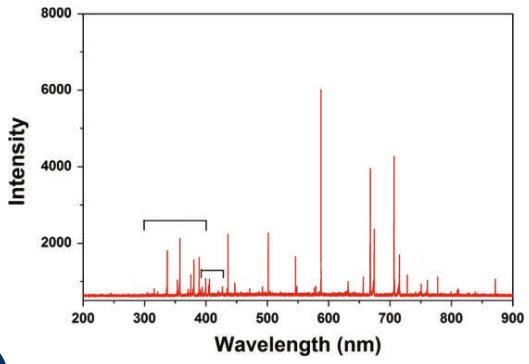
ASPHIRE SPECTRO

About Optical Emission Spectrometer:

Optical Emission Spectrometer is a standard technique for analyzing the elemental composition of metals and alloys. A spectrometer is an optical instrument that can detect spectral lines and measure their wavelength or intensity.

Optical emission spectrometry involves applying electrical energy in the form of spark generated between an electrode and a metal sample, whereby the vaporized atoms are brought to a high energy state within a so-called "discharge plasma". Spectral lines.





Elements	Scan1	Scan2	Scan3	Scan4	Mean	SD
C	0.4229	0.4118	0.4043	0.4014	0.4101	0.0096
Si	0.2884	0.2933	0.2890	0.2924	0.2908	0.0024
Mn	0.5547	0.5554	0.5561	0.5493	0.5539	0.0031
P	0.0047	0.0050	0.0050	0.0050	0.0049	0.0001
S	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0000
Cr	1.5118	1.5093	1.5104	1.4960	1.5069	0.0073
Mo	0.3222	0.3140	0.3117	0.3067	0.3137	0.0064
Ni	0.1446	0.1446	0.1433	0.1416	0.1435	0.0014
Al	1.0907	1.1066	1.0996	1.0724	1.0923	0.0148
Cu	0.1360	0.1336	0.1345	0.1342	0.1346	0.0010
Ti	0.0090	0.0091	0.0090	0.0089	0.0090	0.0001
V	0.0024	0.0044	0.0030	0.0037	0.0034	0.0008
Co	0.0072	0.0070	0.0070	0.0071	0.0071	0.0001
B	0.0002	0.0002	0.0002	0.0002	0.0002	0.0000
Sn	0.0058	0.0058	0.0059	0.0060	0.0059	0.0001
N	0.0033	0.0031	0.0032	0.0030	0.0032	0.0001
Mg	0.0002	0.0002	0.0002	0.0002	0.0002	0.0000
Fe	95.4563	95.4590	95.4817	95.5383	95.4838	0.0381

ASPHIRE SPECTRO

Asphire AS-S1

Technical Specification

CMOS/CCD
- High resolution CMOS/CCD multi detectors

Optics
- Stabilized against temperaturefluctuations
- Effective wavelength range: 170-430 nm, the applicable and configured wavelength range is based on the customer's application requirements
- Automated profiling

Analysis Modules
- Optimized to customer requirements
- Expansion of additional modules on-site possible

Spark Stand
- Open spark stand for high sample throughput and various kinds ofsample geometries
- Minimized argon consumption Controlled with Software
- Optimized argon flow
- Reduced cleaning intervals
- Spark stand plate easily exchangeable

Excitation System.

Fully digitalized plasma generator with digital discharge definition, digital pulse generation and digital offline pulse control
Max. spark frequency: 1000 Hz

Readout System

Single board readout system
Dedicated controlled System for each CMOS/CCD detector

Spectrometer PC (minimum configuration)
- Intel® Core™ i3/i5/i7
- 8 GByte RAM
- 500 GB SSD
- DVD +/- RW Drive
- Graphic adapter
- USB ports
- Audio sound card
- 2 Network adapters
- Windows 10/11™ 64 Bit Professional Operating System
- Keyboard and mouse
- Monitor
- Printer

Software
- Asphire Analytical Software for analytical operation and calibration
- Continuous automatic hardware diagnosis in the background
- Automatic alloy verificationand identification
- Result Manager
- Maintenance Scheduler

Environmental Conditions
- Room temperature: 18-28°C maintained with AC
- Relative humidity: <80 %, non-condensing
- Atmosphere: free of corrosive vapors and high dust pollution

Spectrometer Data
- 220 V 50 Hz 1 Ph. Earthing below 1 V
- Max. 800 VA during sparking
- Version (Higher End):

	Benchtop	Floor model
Depth:	800 mm	800 mm
Width:	700 mm	700 mm
Height:	450 mm	1250 mm
Weight:	70 kg	120 kg

Asphire Spectro Model AS-S1 is an Optimum Decision to the quick analysis with high accuracy and precision for the customer. These Laboratory Instruments can work due to the excitations of the electrons via the addition of energy which is in the form of some wavelength of the electromagnetic radiation which is usually light or ultraviolet.

AS-S1 is an advanced CCD/CMOS based Optical Emission Spectrometer and have the multi base and matrices (Ferrous, Aluminum, Copper, Nickel, Zinc, Tin, Lead, Titanium etc.) for Metal Analysis.

AS-S1 is one of the lightest ultra - compact spark Emission, Excellent performance, and competitiv e price. AS-S1 Model have 25+ elements and we can also upgrade as per customer requirements

Maximise Productivity with Reliable Metals Analysis

• Ferrous & Non-Ferrous Metals and Alloys •

ASPHIRE SPECTRO

Asphire AS-S2
Technical Specification

CMOS/CCD
- High resolution CCD Single detector

Optics
- Stabilized against temperaturefluctuations
- Effective wavelength range: 170-410 nm, the applicable and configured wavelength range is based on the customer's application requirements

Analysis Modules
- Optimized to customer requirements

Spark Stand
- Open spark stand for high sample throughput and various kinds ofsample geometries
- Minimized argon consumption Controlled with Software
- Optimized argon flow
- Reduced cleaning intervals
- Spark stand plate easily exchangeable

Excitation System.

Fully digitalized plasma generator with digital discharge definition, digital pulse generation and digital offline pulse control
Max. spark frequency: 1000 Hz

Readout System

Single board readout system
Dedicated controlled System for each CCD detector

Spectrometer PC (minimum configuration)
- Intel® Core™ i3/i5/i7
- 8 GByte RAM
- 500 GB SSD
- DVD +/- RW Drive
- Graphic adapter
- USB ports
- Audio sound card
- 2 Network adapters
- Windows 10/11™ 64 Bit Professional Operating System
- Keyboard and mouse
- Monitor
- Printer

Software
- Asphire Analytical Software for analytical operation and calibration
- Continuous automatic hardware diagnosis in the background
- Result Manager
- Maintenance Scheduler

Environmental Conditions
- Room temperature: 18-28°C maintained with AC
- Relative humidity: <80 %, non-condensing
- Atmosphere: free of corrosive vapors and high dust pollution

Spectrometer Data
- 220 V 50 Hz 1 Ph. Earthing below 1 V
- Max. 800 VA during sparking
- Version (Higher End):

Benchtop	Floor model
Depth: 700 mm	700 mm
Width: 600 mm	600 mm
Height: 400 mm	1250 mm
Weight: 60 kg	100 kg

Asphire Spectro Model AS-S2 is an Optimum Decision to the quick analysis with high accuracy and precision for the customer. These Laboratory Instruments can work due to the excitations of the electrons via the addition of energy which is in the form of some wavelength of the electromagnetic radiation which is usually light or ultraviolet.

AS-S2 is an advanced CCD based Optical Emission Spectrometer and have the single base and multi matrices (Ferrous, Aluminum, Copper, Nickel, Zinc, Tin, Lead, Titanium etc.) for Metal Analysis.

AS-S2 is one of the lightest ultra - compact spark Emission, Excellent performanc e, and competitive price. AS-S2 Model have 15+ elements .

Maximise Productivity with Reliable Metals Analysis

• Ferrous & Non-Ferrous Metals and Alloys •

ASPHIRE SPECTRO

Asphire AS-S3
Technical Specification

CMOS/CCD
- High resolution CMOS/CCD multi detectors

Optics
- Stabilized against temperaturefluctuations
- Effective wavelength range: 115-800 nm, the applicable and configured wavelength range is based on the customer's application requirements
- Automated profiling

Analysis Modules
- Optimized to customer requirements
- Expansion of additional modules on-site possible

Spark Stand
- Open spark stand for high sample throughput and various kinds ofsample geometries
- Minimized argon consumption Controlled with Software
- Optimized argon flow
- Reduced cleaning intervals
- Spark stand plate easily exchangeable

Excitation System.

Fully digitalized plasma generator with digital discharge definition, digital pulse generation and digital offline pulse control
Max. spark frequency: 1000 Hz

Readout System

Single board readout system
Dedicated controlled System for each CMOS/CCD detector

Spectrometer PC (minimum configuration)
- Intel® Core™ i3/i5/i7
- 8 GByte RAM
- 500 GB SSD
- DVD +/- RW Drive
- Graphic adapter
- USB ports
- Audio sound card
- 2 Network adapters
- Windows 10/11™ 64 Bit Professional Operating System
- Keyboard and mouse
- Monitor
- Printer

Software
- Asphire Analytical Software for analytical operation and calibration
- Continuous automatic hardware diagnosis in the background
- Automatic alloy verification and identification
- Result Manager
- Maintenance Scheduler

Environmental Conditions
- Room temperature: 18-28°C maintained with AC
- Relative humidity: <80 %, non-condensing
- Atmosphere: free of corrosive vapors and high dust pollution

Spectrometer Data
- 220 V 50 Hz 1 Ph. Earthing below 1 V
- Max. 800 VA during sparking
- Version (Higher End):

	Benchtop	Floor model
Depth:	800 mm	800 mm
Width:	700 mm	700 mm
Height:	450 mm	1250 mm
Weight:	70 kg	120 kg

Asphire Spectro Model AS-S3 is an Optimum Decision to the quick analysis with high accuracy and precision for the customer. These Laboratory Instruments can work due to the excitations of the electrons via the addition of energy which is in the form of some wavelength of the electromagnetic radiation which is usually light or ultraviolet.

AS-S3 is an advanced CCD/CMOS based Optical Emission Spectrometer and have the multi base and matrices (Ferrous, Aluminum, Copper, Nickel, Zinc, Tin, Lead, Titanium etc.) for Metal Analysis.

AS-S3 is one of the lightest ultra - compact spark Emission, Excellent performance, and competitiv e price. AS-S3 Model have 55+ elements and we can also upgrade as per customer requirement s.

Asphire As-S3 Features:

* Optical Systems
- Wavelength Range: 115-800 nm |130-800 nm |140-800 nm
- Focal Length: 300mm / 500mm / 750 mm
- Holographic Grating: 1800 / 2400 / 3600 grooves/mm
- CMOS / CCD detectors ranging from 2-16

(Tailor Mode-as per the requirement of Elements/Base)

** The applicable and configured wavelength range, Focal Length, Gratings, Detectors are base on the customer's application requirements. Optics are temperature stabilized and pressure compensated.

Maximise Productivity with Reliable Metals Analysis

• Ferrous & Non-Ferrous Metals and Alloys •

ASPHIRE SPECTRO

SOME OF OUR ESTEEMED CUSTOMERS

INDIAN RAILWAYS	INDIAN RAILWAY	HAL		INDO RUSSIAN RIFLES PRIVATE LIMITED
G. B. PANT UNIVERSITY OF AGRICULTURE & TECHNOLOGY, PANTNAGAR	CHAUDHARY CHARAN SINGH HARYANA AGRICULTURAL UNIVERSITY	CSIR-CMERI, Durgapur	NIT JAMSHEDPUR	VPL VISHAL PIPES LTD.
FORTUNE GROUP	PRIMEGOLD A PRODUCT OF PRIMEGOLD-SAIL JVC LTD.	AUTO INTERNATIONAL	COSMO ANALYTICAL LAB	Quality INTERNATIONAL
QSM QUALITY STEEL MILLS	VICTOR TESTING AND CONSULTING SERVICES	SWASTIK CASTINGS PVT. LTD.	Raicon Labs Pvt. Ltd.	Friends Castings
JAI BHARAT STEEL	GAUR SPECTRO LAB	RNG EXPORTS PRIVATE LIMITED AN ISO 9001 COMPANY	CIMEC	KAMA ASSOCIATION
एन एस आई सी N S I C	Shri Krishna Test House SKTH	SHIVAM TEST HOUSE SINCE 2010		SA
RE	PEW Engineering Pvt. Ltd.	BB COACHTECH SHAPING METAL	KAAZ Aluminium	INDIAN RAILWAYS

ASPHIRE SPECTRO

SPECTOMETER ACCESSORIES

Sample Polishing Machine:

The Sample Polishing Machine Asphire AS-SPM01 & AS-SPM02 Should ensure the high-quality sample preparation for ferrous and non ferrous alloys samples.

Technical Specification:-

- Granding / polishing with 36 or 60 grit no. polishing paper
- Power supply: 230 VAC , 50 Hz., 1 Phase
- Speed: 1440 / 2800 RPM• Disc Size: 14 Inch.
- Grit removal
- Noise or vibration level are minimum.
- Designed for sample preparation to analyse low levels of elements.
- 1 year standard warranty

Wire Adaptors, Sample Holder, Copper Mould

Certified Reference Materials (CRM)

ASPHIRE SPECTRO

OUR PRESENCE

ASPHIRE SPECTRO

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