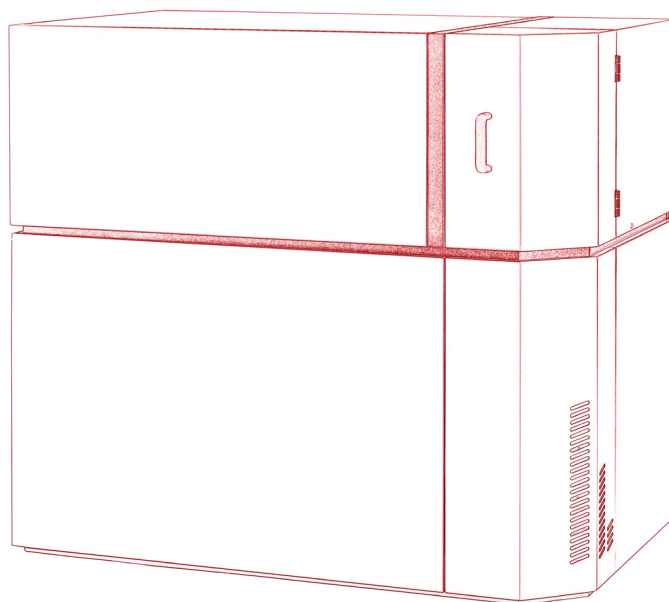


GDA 550 HR



GDA 550 HR is an extremely sensitive high-performance spectrometer to determine the chemical composition of surfaces and coatings.

With up to 79 analytical element channels, using photomultiplier tubes, the GDA 550 HR glow discharge spectrometer is perfect for demanding applications requiring flexibility, high resolution, and analytical precision.

Developed by SPECTRUMA, this optional high resolution CCD optics extends the analytical capabilities of the GDA 550 HR into unparalleled dimensions. Due to the unique function of the CCD detector one can add almost an unlimited amount of analytical CCD channels to any given method. This flexibility permits the fast determination of the composition and thickness of technical coatings. All elements including the light ones (H, O, N, Cl and C) may be determined quantitatively.

Primarily designed to analyse coatings up to a depth of 200 μm , with a depth resolution of one nanometre on the surface and 5 % relative in deeper regions, the GDA 550 HR is also capable of bulk analysis (chemical composition of materials) providing superior linearity of calibration curves for complex matrices. The detection limits at most are 0.1 ppm.

The GDA 550 HR is equipped with a newly developed glow discharge excitation source allowing sputtering diameters of 8 mm to 1 mm. Due to the small sealing ring of only 5 mm in diameter, the analysis of small and geometrically complicated samples is possible. By using the optional universal sample unit (USU) also very small and non-flat samples can be analysed, which could not be sealed with an O-ring normally.

The GDA 550 HR is suitable for all electrically conductive matrices.

GDA 550 HR

	MODEL	GDA 550 HR
Optics	Polychromator/ Focal length (mm)	750
	PMTs (photomultiplier tubes)	x
	Max. channels	63
	CCD (charge-coupled device)	-
	Wavelength range (nm)	120 - 800
GD Source	Direct current source (DC)	x
	Radio frequency source (RF)	-
	Standard anode diameter : 2.5 mm or 4 mm	x
Vacuum	Vacuum chamber	Rotary vane pump
	Glow discharge lamp	Rotary vane pump
	Number of vacuum pumps	2
Cooling	Closed sample cooler	x
Options	CCD (400 mm)/ Wavelength range (200 - 800 nm)	x
	CCD- extension	-
	PMT- extension (400 mm) for max. 16 PMTs	x
	Monochromator/ PMT wavelength range (200 - 1200 nm)	x
	External plasma ignition	-
	Universal sample unit (DC)	x
	Universal sample unit (RF)	-
	Universal sample unit for wires	x
	Scroll vacuum pump	x
	Turbomolecular pump	x
	Automatic sampling unit	x
	Transfer chamber	x
	External cooling (type Julabo)	x
	Open sample cooler	x
	Gas switcher for alternative plasma gases 2/ 3 gases	x
	Anode diameter (additional) : 1 mm, 2.5 mm, 4 mm, 8 mm	x
	Molecular spectroscopic database	x
Dimensions	Length/ Width/ Height (mm)	1445/ 890/ 1380
	Weight (kg)	540