

Your new business partner for RoHS, Halogen free, ELV applications



MESA-50



X-RAY FLUORESCENCE ANALYZER



Touch and

HORIBA has been selling our XGT-WR series of EDXRF analyzers worldwide for many years to provide screening measurements of samples containing hazardous elements such as Pb, Cd, Cr, Hg, Br for RoHS, ELV, and Cl for halogen-free applications.

XGT systems are used daily throughout the world. HORIBA has now developed the new MESA-50 EDXRF analyzer, based on our vast experience with customer requirements and knowledge. MESA-50 provides user friendly operation and excellent performance. MESA-50 includes three analysis diameters, suitable for every sample, from thin cables and electronic parts to bulk samples. The unique combination of SDD detector and DPP changes the landscape of EDXRF analysis.

HORIBA's new MESA-50 supports ecological procurement; it contributes not only to EU RoHS and ELV compliance testing, but also regulatory work for many other countries.



Outstanding 5S Technology



1. Speedy

- **Silicon Drift Detector (SDD) drastically reduces measurement times, and provides increased sensitivity, for true high throughput analysis.**

2. Small

- **Portable, small footprint and light weight**
- **Internal battery power supply**

3. Simple

- **Reduces routine maintenance work (LN2 free operation)**
- **No need for vacuum pumps**
- **Intuitive simple measurement process for all material types**

4. Smart

- **English/Japanese/Chinese user interfaces**
- **Excel® data management tool**

5. Safe

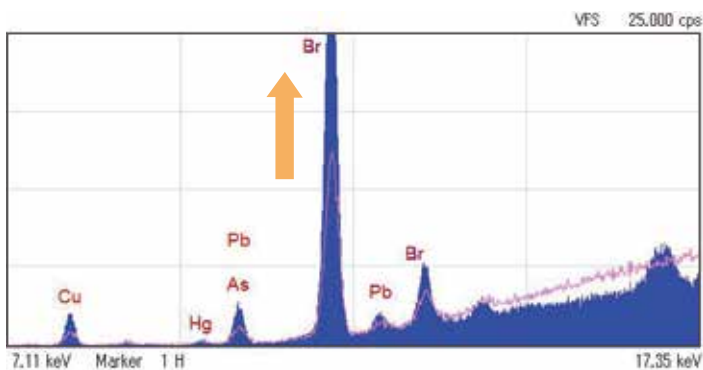
- **No worry about X-ray leakage**

Feel!

Debut! MESA-50



MESA-50 optics



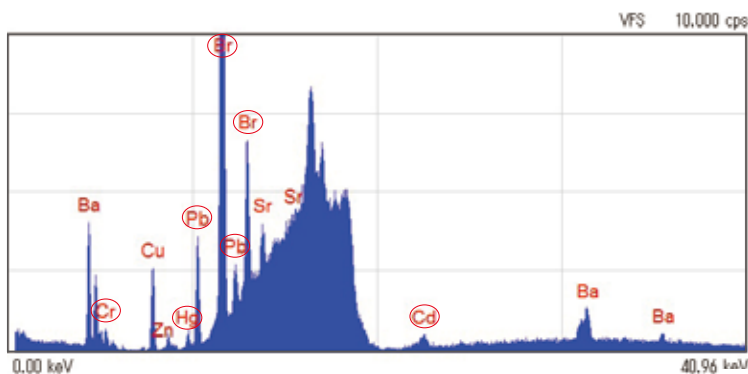
Blue: MESA-50(Ø1.2mm), Red: XGT-1000WR(Ø1.2mm)

MESA-50 with SDD can:

- 1) Increase spectrum intensity and resolution
- 2) Decrease background

Compact optical design makes MESA-50 a portable instrument. The small X-ray generator with low power consumption permits the battery powered mode.

Better performance with special filters



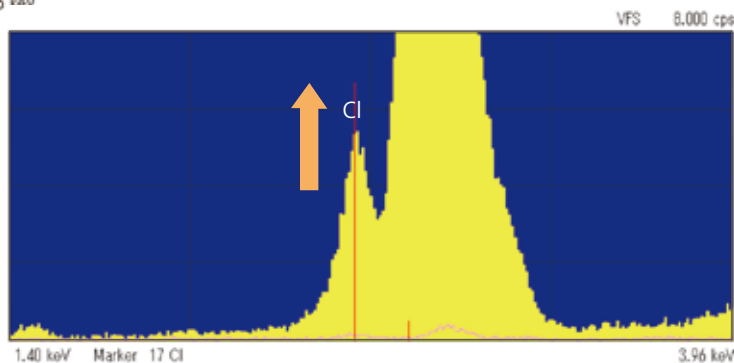
Blue: MESA-50(Ø1.2mm)

4 filters are included:

A unique filter allows seven hazardous elements to be detected simultaneously including Pb, Cd, Hg, Cr, Br, Sb and As.

The X-ray tube target material is optimized for high sensitivity Cl analysis.

The MESA-50 doesn't require a vacuum pump for Cl measurement.



Yellow: MESA-50(Ø3mm), Red: XGT-1700WR(Ø3mm)

3 size collimators

Ø1.2mm, 3mm, 7mm (Automatic switching)

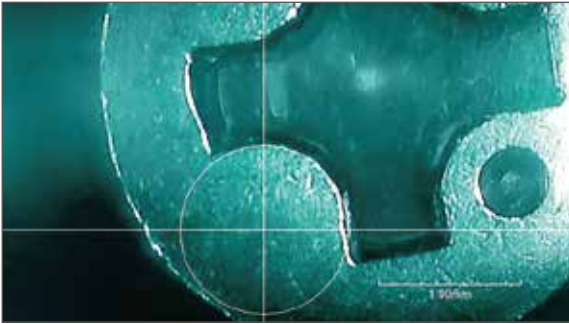
Operator can select the most suitable collimator size. The precise analysis area is displayed on the optical image. The small 1.2 mm beam means that operators can simply analyze individual cables, without needing to line up multiple cables to cover the X-ray beam area.



Simple operation, excellent support tools

1. Position the sample

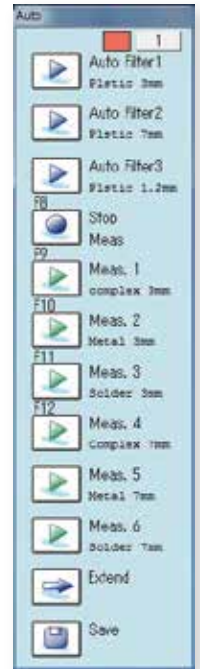
The clear optical image from the CCD camera allows easy positioning of the sample. The X-ray beam and CCD image are coaxial, ensuring that the visualized measurement point is precisely analyzed.



2. Click the measurement button

Optimized measurement conditions for each material type are assigned to each measurement button (maximum 18 buttons). One click starts the measurement.

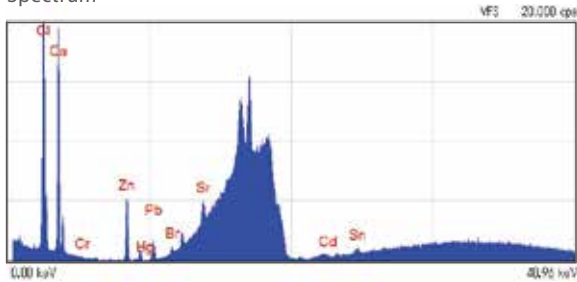
Operator does not need to set conditions each time, and no filter switching is necessary, thus minimizing possible operator error. Customized measurement buttons can be created, with original settings.



3. Display of spectrum and calculation result

Automatic display of quantitative results (concentration & 3 sigma) after measurement.

Spectrum



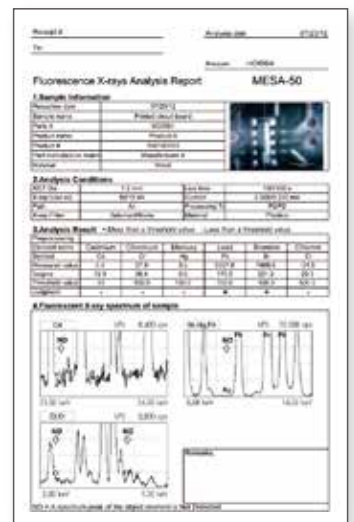
Result

Element	Concentration (%)	3-sigma (%)
Cr	12.0	0.2
V	0.5	0.1
Zn	15.0	0.3
Sr	1.0	0.1
Pb	0.1	0.01
Bi	0.05	0.005
Cd	0.01	0.001
Sn	0.02	0.002

4. Excel® data management software and report format

Automatically transfer to Excel® with one button click. If internal administration values are registered, OK/NG (No Good) judgments (results vs threshold values) are performed.

Measurement report is also made with one button click.



Seq.	Parts #	Part Name	Operator	Date	Part	Cd	Pb	Cr
						(ppm)	(ppm)	(ppm)
1	0A0001	Cable1	HORIBA	07/20/12	Center	13.9	17.7	OK
2	0A0002	Cable2	HORIBA	07/20/12	Center	0.0	8.0	OK
3	0A0003	Cable3	HORIBA	07/20/12	Center	3.0	3.3	OK
4	0A0004	Cable4	HORIBA	07/20/12	Center	1.9	2.0	ND

Portable! Small size and battery system



Less than One Cubic Foot!
 Size: 208(W) x 294(L) x 205(H)mm
 Weight: 12kg

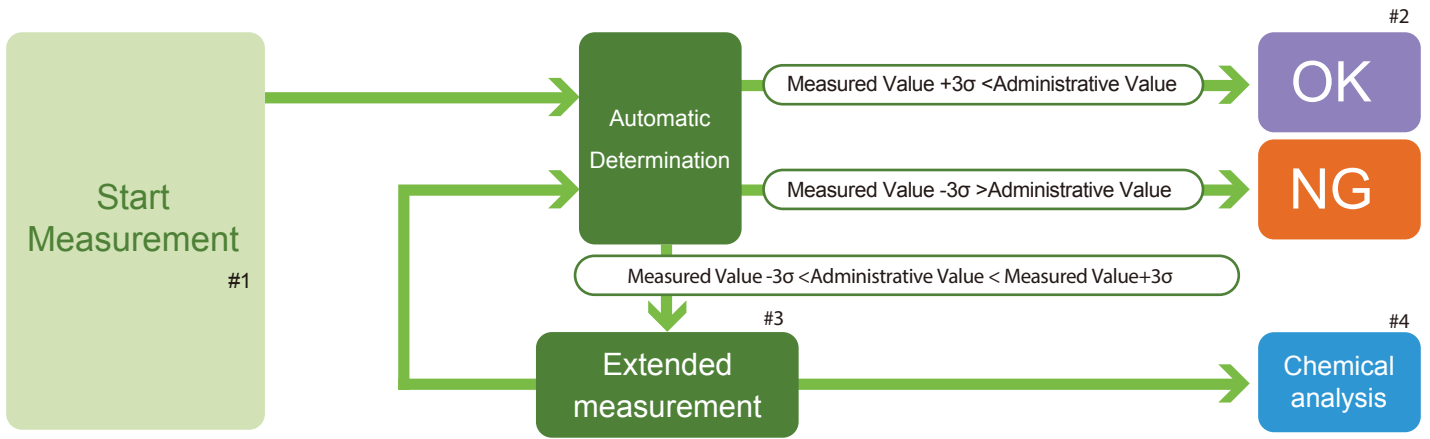
Battery System

MESA-50 can function for up to 6 hours when powered by its internal battery.



Optional lightweight carrying case

Automatic measurement time extension



This function automatically sets up the optimum measurement time, based on judgment of results according to administrative values for the harmful element concentrations.

#1 Measurement time varies with concentration of harmful element and material type of sample

#2 The measurement will be terminated when OK or NG can be determined

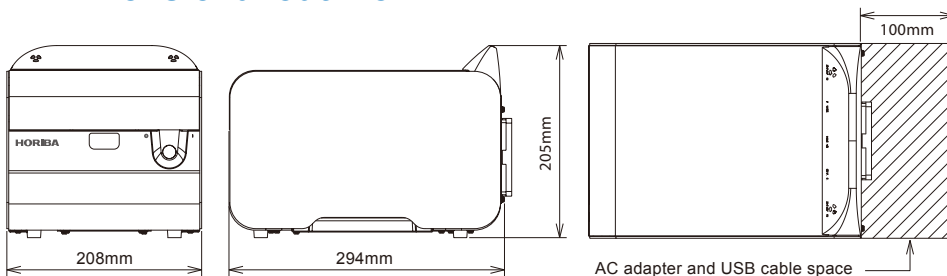
#3 If NG, set extended measurement time and repeat number (1-9 times)

#4 Chemical analysis such as ICP would be recommended if it's impossible to determine OK/NG after maximum repeat measurement is finished at #2 .

MESA-50 specification

Basic items	Principle	Energy dispersive X-ray fluorescence spectrometer
	Target application	RoHS, ELV, Halogen-Free
	Measurement Elements	13Al - 92U
	Sample types	Solid, Liquid, Powder
X-ray generator	X-ray tube	Max 50kV, 0.2mA
	X-ray analysis diameter	1.2mm, 3mm, 7mm (Automatic switching)
	X-ray primary filter	4 types (Automatic switching)
Detector	Type	SDD (Silicon Drift Detector)
	Signal processor	DPP (Digital Pulse Processor)
Sample chamber	Atmosphere	Air
	Sample imaging	CCD camera
Utility	Operation	PC (Windows [®] 7)
	Power supply	AC adapter (100-240V, 50/60Hz), battery
Software	Analysis Function	Multilayer Film FPM (Optional), Sb/As analysis (Optional)

Dimensional outline



Installation example



Options & Consumables



Lightweight carrying case



Cable fixing jig



Disposable cell



Transmission X-ray film



Cell window



POWER

CHARGE

ERROR



Applying to the EU RoHS Directive: This product is compliant with the restriction of the designated 6 hazardous substances(*).
(*) lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE)

Using lead-free soldering: Lead-free soldering is used for mounting components of printed circuit boards.

- Many countries consider the reinforcement of regulations concerning the risk caused by lead to human body and the environment



Please read the operation manual before using this product to assure safe and proper handling of the product.

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