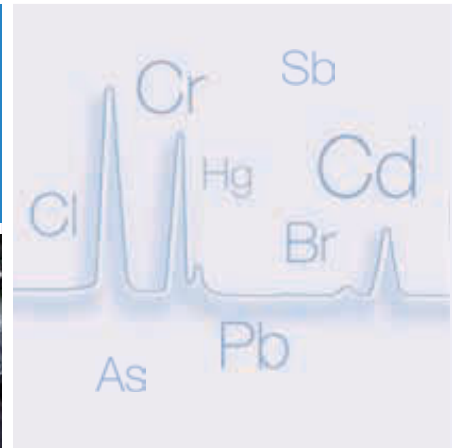




MESA-50

X-ray Fluorescence Analyzer



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



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 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 (Silicon Drift Detector) and DPP (Digital Pulse Processor) changes the landscape of EDXRF analysis. HORIBA's 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

- **SDD (Silicon Drift Detector) 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

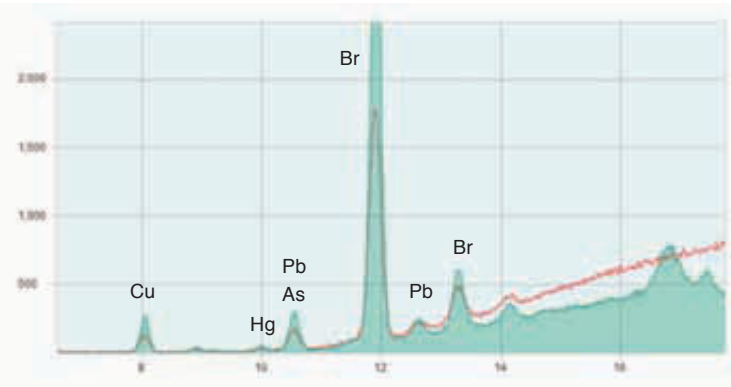
- **Automatic measurement termination**
- **English/Japanese/Chinese user interfaces**

5. Safe

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

Feel! MESA-50

MESA-50 optics



MESA-50 with SDD can:

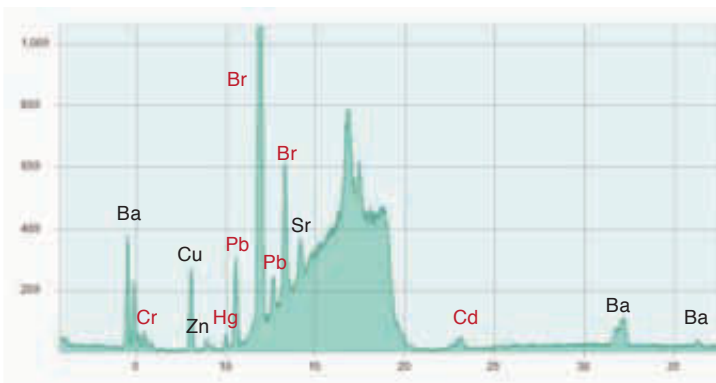
- 1) Increase spectrum intensity and resolution
- 2) Decrease background

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

Green: MESA-50 $\phi 1.2\text{mm}$

Red: Previous model XGT-1000WR $\phi 1.2\text{mm}$

Better performance with special filters



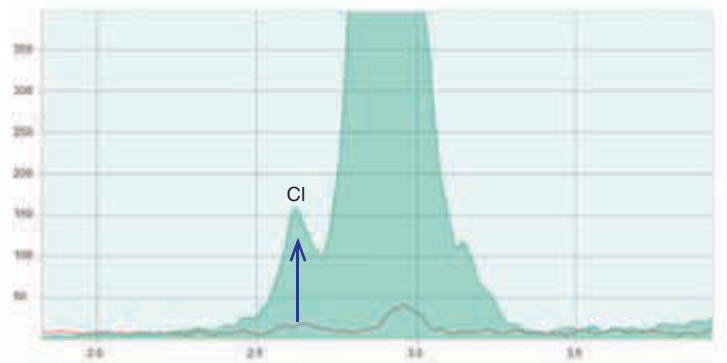
4 filters are included; a unique filter allows seven hazardous elements to be detected simultaneously including Pb, Cd, Hg, Cr, Br, Sb and As.

Green: MESA-50 $\phi 1.2\text{mm}$

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.

Green: MESA-50 $\phi 1.2\text{mm}$

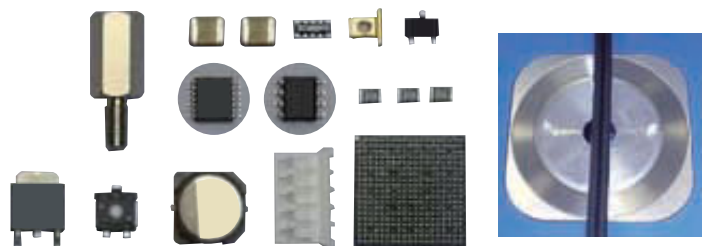
Red: Previous model XGT-1700WR $\phi 1.2\text{mm}$



3 size collimators

$\phi 1.2\text{ mm}$, 3 mm , 7 mm
(Automatic switching)

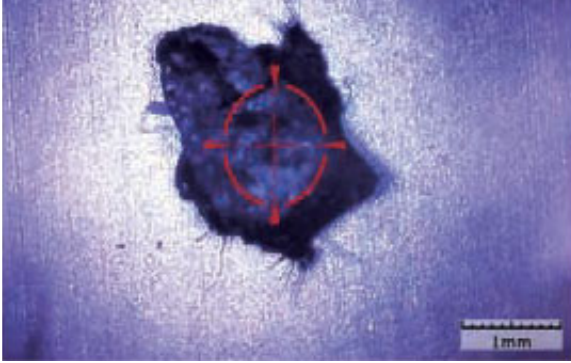
Operator can select the most suitable collimator size. The precise analysis area is displayed on the optical image. The small 1.2 mm beam means that operators can simply analyze individual cables, without needing to line up multiple cables to cover the X-ray beam area.



Simple operation, excellent support tools

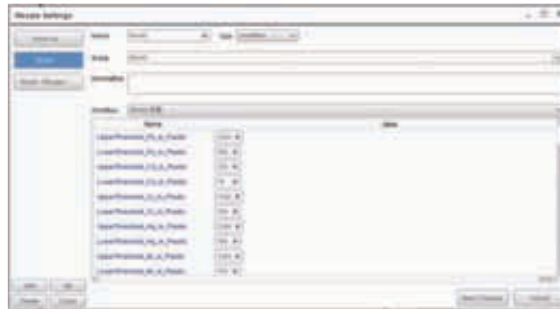
1. Position the sample

The clear optical image from the CCD camera allows easy positioning of the sample. The visualized measurement point is shown on the CCD image.



2. Click the measurement button

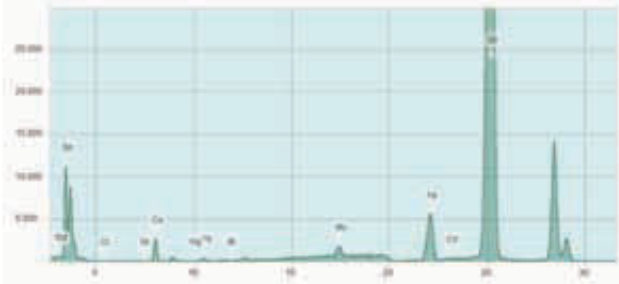
One click starts the measurement for RoHS. Software selects suitable measurement condition and parameter every matrix automatically. Operator does not need to set conditions each time, and no filter switching is necessary, thus minimizing possible operator error. Customized measurement buttons (recipe) 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	Test Sigma	Judgment	Analysis Reference
Pb	1194.7 ppm	57.0 ppm	OK	99%
Cd	148.8 ppm	126.8 ppm	NG	99%
Cr	108.3 ppm	207.8 ppm	OK	99%
Hg	4.1 ppm	47.7 ppm	OK	99%
Br	7.8 ppm	14.5 ppm	OK	99%

Other Elements	Concentration	Test Sigma	Judgment	Analysis Reference
Sn	94.9132 wt%	9.0978 wt%	OK	99%
Ag	3.6496 wt%	9.0978 wt%	OK	99%
Cu	1.0095 wt%	9.0978 wt%	OK	99%
Mo	0.3374 wt%	9.0978 wt%	OK	99%
Cd	0.1282 wt%	9.0978 wt%	OK	99%
Pb	0.1226 wt%	9.0978 wt%	OK	99%
Cr	0.0214 wt%	9.0978 wt%	OK	99%

4. Results & report format

Measurement report can be saved in Excel®, Word, or PDF format. If internal administration values are registered, OK/NG (No Good)/Border judgments (results vs threshold values) are performed.



HORIBA XRF Analysis Report

Measurement Information

Project	2015-09-02	Date	2015-09-07 20:38
Measurement	RoHS Sn 6	Analysis	Analysis 3
Workflow	RoHS 16	User	

Measurement Settings

Voltage	50 kV
Filter	Mid
Meas Time	180 s
Current	168 μA
Collimator	3 mm
Processing Time	Process 2

Sample Image

Result

Element	Concentration	Unit	Line	Intensity(cps/μA)	Judgment
Sn	94.9133	wt%	Kα	119303.42	---
Ag	3.6496	wt%	Kα	7198.67	---
Cu	1.0095	wt%	Kα	1783.77	---
Mo	0.3374	wt%	Kα	1228.68	---
Cd	0.1282	wt%	Kα	240.87	---
Pb	0.1226	wt%	Lα	273.94	---
Cr	0.0214	wt%	Kα	5.42	---

Portable! Small size and battery system



Less than One Cubic Foot!

Size: 208(W) x 294(L) x 205(H) mm
Weight: 12 kg

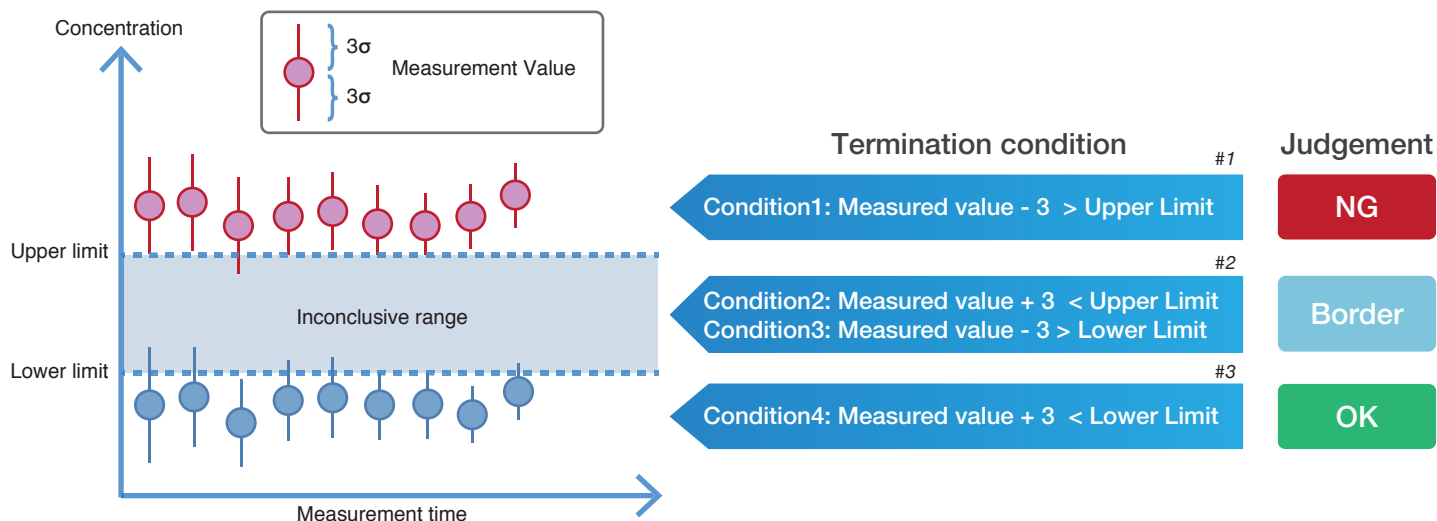
Battery System

MESA-50 has its internal battery, whose life is up to 6 hours.



Option: Lightweight carrying case (Example)

Automatic judgement and measurement termination



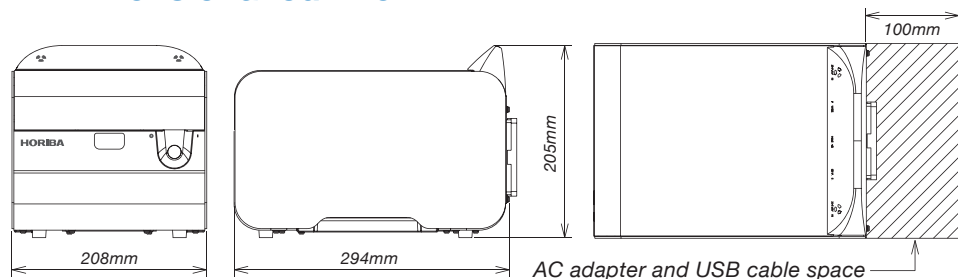
- #1. At the time when at least one of focused element is satisfied with condition1 for two times in a row.
- #2. At the time when at least one of focused element is satisfied with condition2 and all focused elements are satisfied with condition3 for two times in a row.
- #3. At the time when all focused elements are satisfied with condition4 for two times in a row.

MESA-50 specification

Basic items	Principle	Energy dispersive X-ray fluorescence spectrometry
	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®8.1 or later)
	Power supply	AC adapter (100-240V, 50/60Hz), battery
Software	Analysis function	Multilayer Film FPM (Optional)

* Windows and Excel are registered trademarks or trademarks of Microsoft Corporation in the United States and other countries.

Dimensional outline



Installation example



Options & Consumables



Cable fixing jig



Disposable cell



Cell window



Transmission X-ray film



Cell frame



POWER

CHARGE

ERROR



Dedicated analyzers for WEEE/RoHS

MESA-50K

X-RAY FLUORESCENCE ANALYZER



Chamber size:
460(W) × 360(D) × 150(H) mm

New!
Big Chamber



XGT-5200WR

X-RAY ANALYTICAL MICROSCOPE



Chamber size:
350(W) × 400(D) × 40(H) mm



The HORIBA Group adopts IMS (Integrated Management System) which integrates Quality Management System ISO9001, Environmental Management System ISO14001, and Occupational Health and Safety Management System OHSAS18001. We have now integrated Business Continuity Management System ISO22301 in order to provide our products and services in a stable manner, even in emergencies.



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