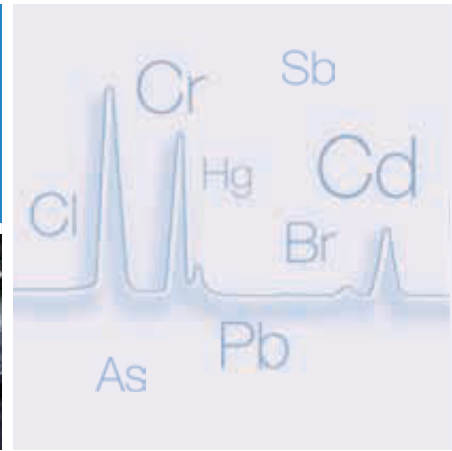




MESA-50

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

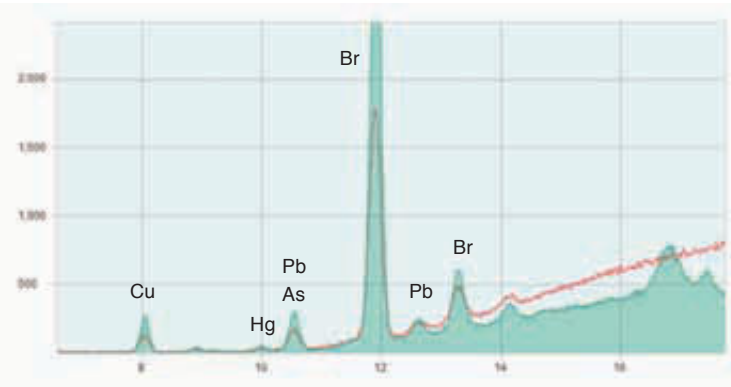
- **Automatic measurement termination**
- **English/Japanese/Chinese user interfaces**

5. Safe

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

Feel! MESA-50

MESA-50 optics



MESA-50 with SDD can:

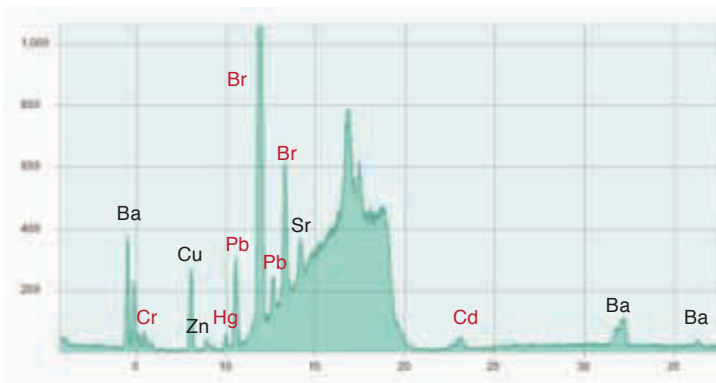
- 1) Increase spectrum intensity and resolution
- 2) Decrease background

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



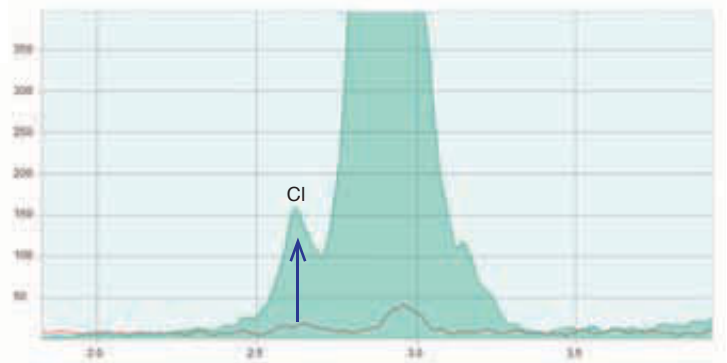
4 filters are included; a unique filter allows seven hazardous elements to be detected simultaneously including Pb, Cd, Hg, Cr, Br, Sb and As.

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 $\phi 1.2\text{mm}$

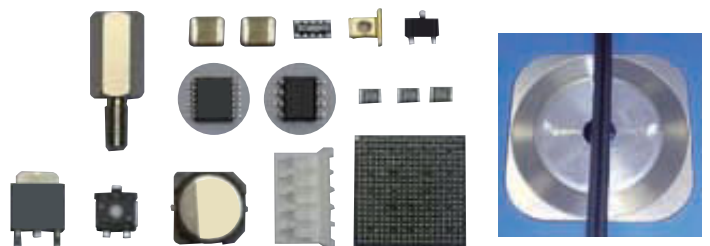
Red: Previous model XGT-1700WR $\phi 1.2\text{mm}$



3 size collimators

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

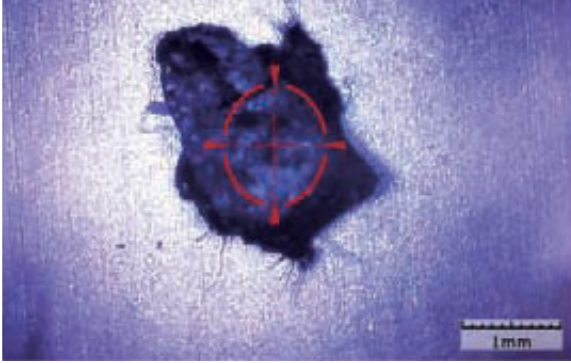
Operator can select the most suitable collimator size. The precise analysis area is displayed on the optical image. The small 1.2 mm beam means that operators can simply analyze individual cables, without needing to line up multiple cables to cover the X-ray beam area.



Simple operation, excellent support tools

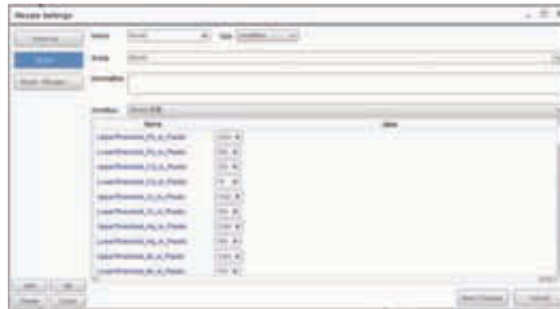
1. Position the sample

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

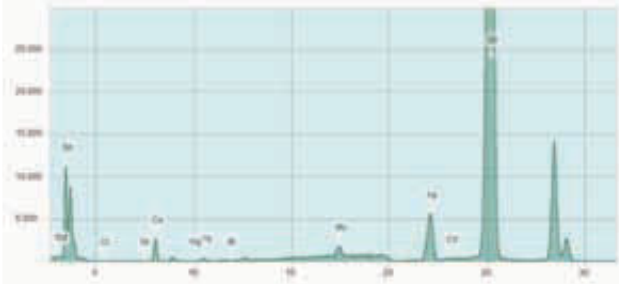
One click starts the measurement for RoHS. Software selects suitable measurement condition and parameter every matrix automatically. Operator does not need to set conditions each time, and no filter switching is necessary, thus minimizing possible operator error. Customized measurement buttons (recipe) 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	OK	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%

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	94.7913	wt%	Kα	119303.42	---
Ag	3.6496	wt%	Kα	7188.67	---
Cu	1.0595	wt%	Kα	1783.77	---
Mo	0.3374	wt%	Kα	1228.68	---
Cd	0.1282	wt%	Kα	240.87	---
Pb	0.1226	wt%	Lα	273.84	---
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

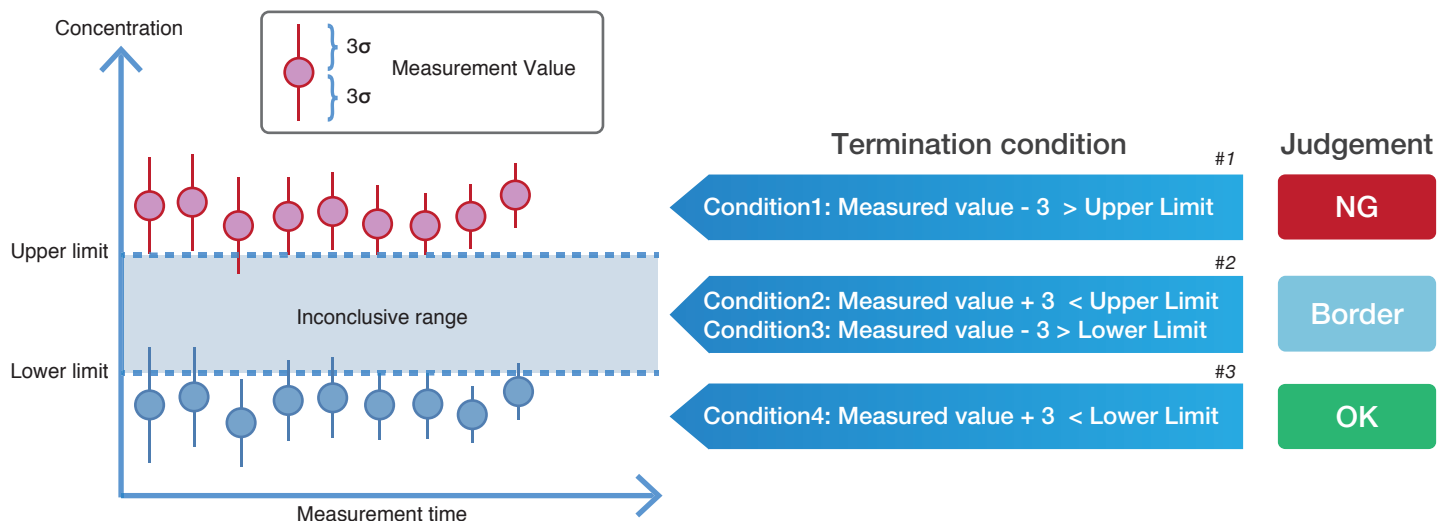
Battery System

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



Option: Lightweight carrying case (Example)

Automatic judgement and measurement termination



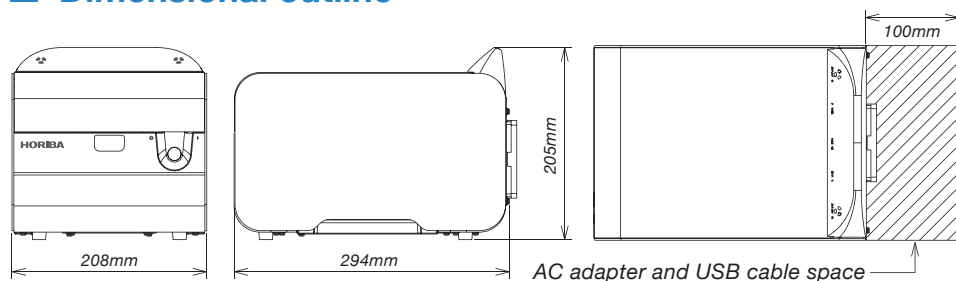
- #1. At the time when at least one of focused element is satisfied with condition1 for two times in a row.
- #2. At the time when at least one of focused element is satisfied with condition2 and all focused elements are satisfied with condition3 for two times in a row.
- #3. At the time when all focused 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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<http://www.horiba.com> e-mail: info@horiba.co.jp

HORIBA, Ltd. Japan

Head Office
2 Miyano Higashi, Kisshoin, Minami-ku, Kyoto, Japan
Phone: 81 (75) 313-8123 Fax: 81 (75) 321-5725

HORIBA (China) Trading Co., Ltd. China

Head Office
Unit D, 1F, Building A, Synnex International Park, 1068 West Tianshan Road, Shanghai, 200335, China
Phone: 86 (21) 6289-6060 Fax: 86 (21) 6289-5553

Beijing Branch
12F, Metropolis Tower, No.2, Haidian Dong 3 Street, Beijing, 100080, China
Phone: 86 (10) 8567-9966 Fax: 86 (10) 8567-9066

Guangzhou Branch
Room 1611 / 1612, Goldlion Digital Network Center, 138 Tiyu Road East, Guangzhou, 510620, China
Phone: 86 (20) 3878-1883 Fax: 86 (20) 3878-1810

HORIBA Instruments (Singapore) Pte Ltd. Singapore

3 Changi Business Park Vista #01-01 Akzonobel House, Singapore 486051
Phone: 65 (6) 745-8300 Fax: 65 (6) 745-8155

HORIBA Vietnam Co., Ltd. Vietnam

Unit 10, 4 Floor, CMC tower, Duy Tan Street, Dich Vong Hau Ward, Cau Giay District, Hanoi, Vietnam
Phone: 84 (4) 3795-8552 Fax: 84 (4) 3795-8553

HORIBA Korea Ltd. Korea

Seoul Branch
10, Dogok-Ro, 6-Gil, Gangnam-Gu, Seoul-Si, 06259, Korea
Phone: 82 (2) 753-7911 Fax: 82 (2) 756-4972

HORIBA India Private Limited India

Head Office
246, Okhla Industrial Estate, Phase 3 New Delhi-110020, India
Phone: 91 (11) 4646-5001 Fax: 91 (11) 4646-5010

Bangalore Office
Kamadhenu, No.17 / 1-32, Bannerghatta Road, Audugodi, Bangalore-560030, India
Phone: 91 (80) 22210071

HORIBA (Thailand) Ltd. Thailand

Head Office
393, 395, 397, 399, 401, 403 Latya Road, Somdetchaopraya, Klongsan, Bangkok, 10600, Thailand
Phone: 66 (2) 861-5995 Fax: 66 (2) 861-5200

East Office
850 / 7 Soi Lat Krabang 30 / 5, Lat Krabang Road, Lat Krabang, Bangkok 10520, Thailand
Phone: 66 (0) 2734-4434 Fax: 66 (0) 2734-4438

PT HORIBA Indonesia Indonesia

Jl. Jalur Sutera Blok 20A, No.16-17, Kel. Kunciran, Kec. Pinang Tangerang-15144, Indonesia
Phone: 62 (21) 3044-8525 Fax: 62 (21) 3044-8521

HORIBA Instruments Inc. USA

Head Office
9755 Research Drive, Irvine, CA 92618, U.S.A.
Phone: 1 (949) 250-4811 Fax: 1 (949) 250-0924

Edison Office
3880 Park Avenue, Edison, NJ 08820, U.S.A.
Phone: 1 (732) 494-8660 Fax: 1 (732) 549-5125

HORIBA Instruments Brasil, Ltda. Brazil

Rua: Presbitero Plinio Alves de Souza, 645, Loteamento Polo Multivias Bairro Medeiros-Jundiai Sao Paulo CEP 13.212-181 Brazil
Phone: 55 (11) 2923-5400 Fax: 55 (11) 2923-5490

HORIBA Jobin Yvon SAS France

16-18 rue du Canal, 91165, Longjumeau Cedex, France
Phone: 33 (1) 64-54-13-00 Fax: 33 (1) 69-09-07-21

HORIBA Jobin Yvon GmbH Germany

Hauptstr. 1* D-82008 Unterhaching, Germany
Phone: 49 (89) 46-23-17-0 Fax: 49 (89) 46-23-17-99

HORIBA ITALIA Srl Italy

Via Luca Gaurico 209-00143, Roma, Italy
Phone: 39 (6) 51-59-22-1 Fax: 39 (6) 51-96-43-34

HORIBA UK Ltd. UK

2 Dalston Gardens, Stanmore, Middx HA7 1BQ, Great Britain, UK
Phone: 44 (208) 204-8142 Fax: 44 (208) 204-6142