

# Energy Dispersive X-ray Fluorescence Spectrometer

# OUR 160RoHS

## Features

- No liquid nitrogen is required, saving your running cost.
- The only applicable power source is AC100V to 240V, 5A.
- Microanalysis for a short time is possible with the high count rate and high resolution power.
- Most suited as analyzer for research of conformity to the ELV and soil pollution control regulations as well as the WEEE and RoHS Directives.
- The large-sized sample chamber enables analysis of a sample in its form kept intact.

**HIGH-SENSITIVITY AND HIGH-PRECISION ANALYZER  
FOR EXCLUSIVE USE TO ANALYZE HAZARDOUS ELEMENTS  
IN RESPONSE TO THE SOIL POLLUTION CONTROL REGULATIONS  
AS WELL AS WEEE AND ROHS DIRECTIVES**



Energy value(keV)		Element signal																																		
1	H	1	H																																	
3	Li	4	Be	5	B	6	C	7	N	8	O	9	F	10	Ne																					
11	Na	12	Mg	13	Al	14	Si	15	P	16	S	17	Cl	18	Ar																					
19	K	20	Ca	21	Sc	22	Ti	23	V	24	Cr	25	Mn	26	Fe	27	Co	28	Ni	29	Cu	30	Zn	31	Ga	32	Ge	33	As	34	Se	35	Br	36	Kr	
37	Rb	38	Sr	39	Y	40	Zr	41	Nb	42	Mo	43	Tc	44	Ru	45	Rh	46	Pd	47	Ag	48	Cd	49	In	50	Sn	51	Sb	52	Te	53	I	54	Xe	
55	Cs	56	Ba	57-71	72	Hf	73	Ta	74	W	75	Re	76	Os	77	Ir	78	Pt	79	Au	80	Hg	81	Tl	82	Pb	83	Bi	84	Po	85	At	86	Rn		
87	Fr	88	Ra	89-103	104	Rf	105	Db	106	Sg	107	Bh	108	Hs	109	Mt																				
lanthanoid		57	La	58	Ce	59	Pr	60	Nd	61	Pm	62	Sm	63	Eu	64	Gd	65	Tb	66	Dy	67	Ho	68	Er	69	Tm	70	Yb	71	Lu					
Actinoid		89	Ac	90	Th	91	Pa	92	U	93	Np	94	Pu	95	Am	96	Cm	97	Bk	98	Cf	99	Es	100	Fm	101	Md	102	No	103	Lr					

# OURSTEX 160 RoHS presents the following advantages.

## ● No liquid nitrogen required.

Silicon Drift Detector (SDD) for semiconductor detection needing no liquid nitrogen is employed for cooling of the unit.

### REDUCTION OF RUNNING COST

## ● High sensitivity, High precision.

High count rate and high resolution power are attained in combination with Digital Signal Processor (DSP) for the scaling circuit.

### TIME SAVING FOR ANALYSIS

## ● For Dedicated Use against Hazardous Heavy Metal Elements.

The optical system is provided with the primary and secondary filters for dedicated use as standard equipment. The secondary filter prevents influences by coexistent elements in the sample.

### RESPONSIVE TO WEEE, ROHS AND SOIL POLLUTION ANALYSIS

## ● Simple installation and No Qualification required.

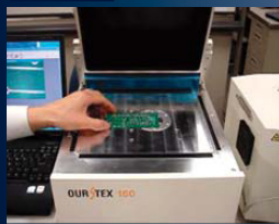
You can complete installation by only taking out the measuring head unit from the storage case for exclusive use and connecting the controller with the operating PC. It is possible to analyze immediately. No qualification of X-ray inspection engineer is required for the operation.

### ON-SITE ANALYSIS IS POSSIBLE

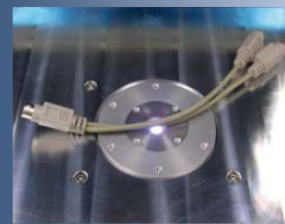
#### Lower Detection Limit

Name of Element	Atomic Symbol	Sample; Polyethylene (PE)
Cadmium	Cd	1 ppm
Lead	Pb	1 ppm
Chrome	Cr	2 ppm
Bromine	Br	1 ppm
Mercury	Hg	3 ppm

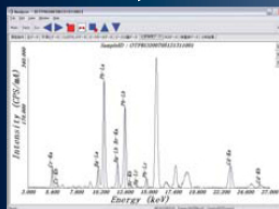
## ● Example of Analysis



● An electronic substrate can be analyzed as it is.



● A cable is also analyzed as it is.

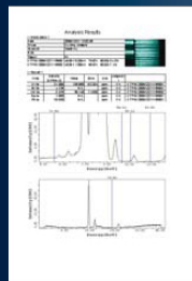


● Waveform of Analysis

## ● Result of Analysis

測定対象	定量値	工口一値	化合物名
Cd+Pb	* 171.928 (ppm)	6.006 (ppm)	Cd
Pb+Cd	1.702 (ppm)	0.167 (ppm)	Pb
Hg+Cr	1.893 (ppm)	0.732 (ppm)	Hg
Pb+Cr	* 1101.263 (ppm)	30.994 (ppm)	Pb
Cr+Hg	97.257 (ppm)	103.936 (ppm)	Cr

## ● With Reporting & Counting Functions



## ● Shape-compensating Function (comparison of difference in thickness)

In use of PVC sheet 2mm thick, containing Cd of 250ppm



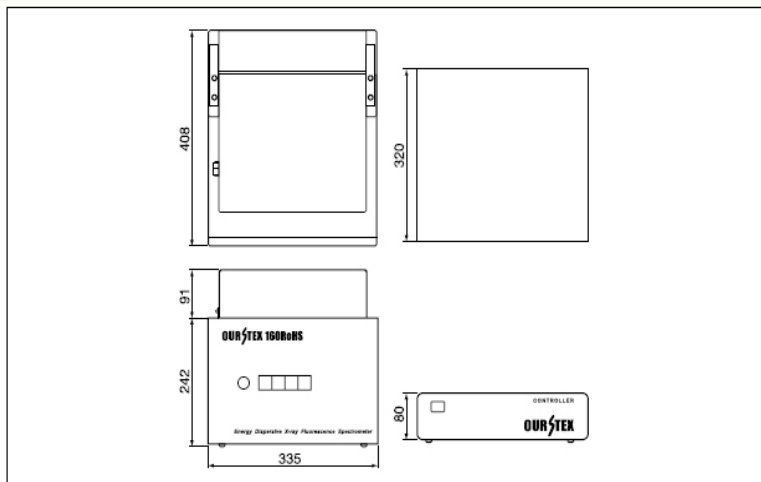
1 sheet 2 sheet 3 sheet

Thickness of sample	Without Cd compensation	With Cd compensation
2mm	250.7	250.9
4mm	307.5	250.6
6mm	327.4	243.2

## Specification

Analytical principle	Energy Dispersive X-ray Fluorescence Analyzer	
Analytical object	Electric/electronic parts, Plastics, Resin products, Soil	
Element to be analyzed	Cr, As, Se, Br, Cd, Hg, Pb (20Ca to 92U)	
Filtration mechanism	Primary filter (2 types) / Secondary filter—Auto change	
Shape of sample chamber	W 270(mm) x D 250(mm) x H 91(mm)	
Observation of sample	Color CCD camera	
Environment of sample chamber	Atmospheric	
Rated X-ray output	48kV, 1.75mA, 50W maximum	
Detector	Electronic cooling SDD (Silicon Drift Detector)	
Counting circuit	Digital processing DSP (Digital Signal Processor)	
Condition of use	Temperature	5 to 27°C
	Humidity	20 to 75%
	Power supply	AC100V to 240V, 5A
	Facility	Grounding Class D
Other (optional)	Standard sample of analytical line (soil, PVC, PE, copper alloys, aluminum alloys)	

## Dimensional drawing



Before an implementation of OURSTEX 160RoHS, a notification to Labor Standards Supervision Office is required.

⚠ For your correct and safe use, please be sure to read the operation manual in advance.

● The product specifications or designs in this literature are subject to change without notice for improvements.  
● The product colors may differ from actual ones due to printing.

Contact for Inquiry

**OURSTEX**  
**OURSTEX Corporation**

Head office: 13-20 HOMMACHI NEYAGAWA OSAKA JAPAN 572-0832

TEL : +81-72-823-9361 FAX : +81-72-823-9340

Tokyo office: 8-37 SANEI-CHO SHINJUKU-KU TOKYO JAPAN 160-0008

TEL : +81-3-3358-4985 FAX : +81-3-3358-1954

● URL : <http://www.ourstex.co.jp> ●