Energy Dispersive X-ray Fluorescence Spectrometer

OURSTEX 100FA

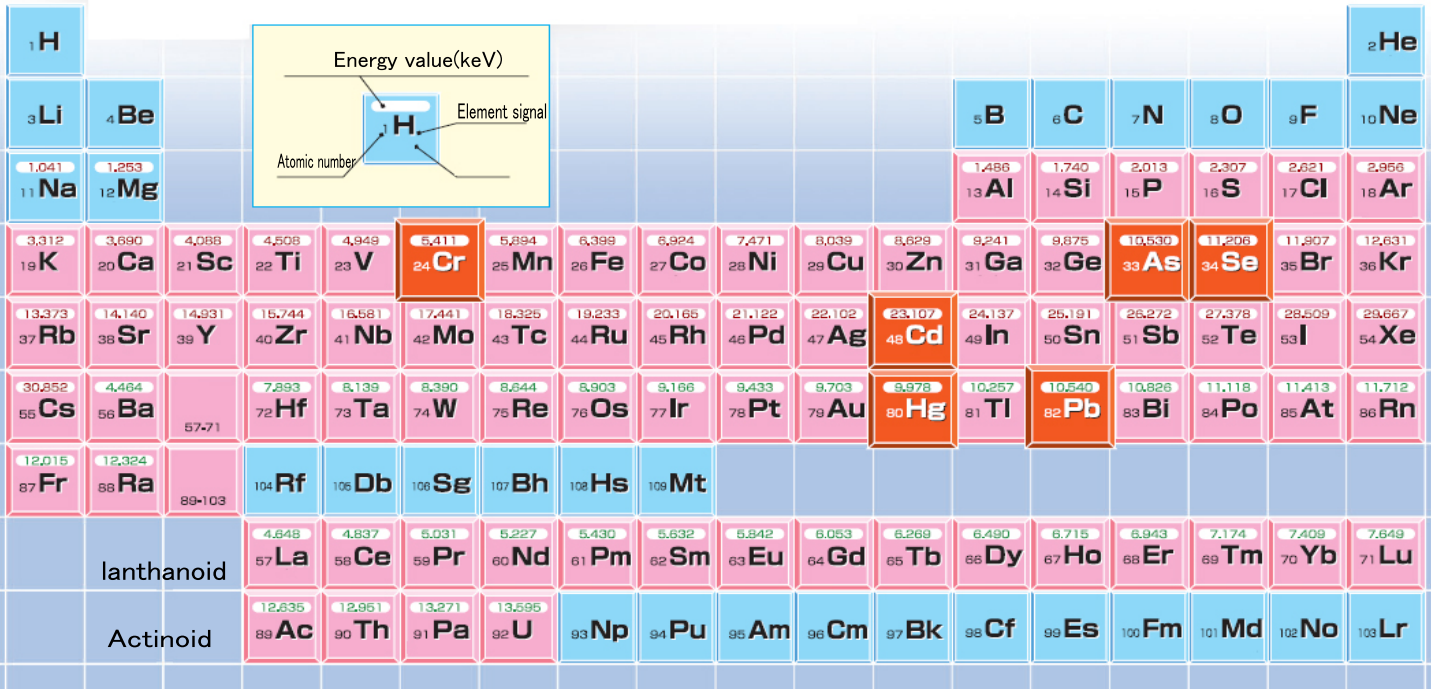
Features

1. Nondestructive quick composition analysis
2. Noncontact analysis of large and/or irregular samples
3. Analysis with closer position of an acute head to a curved sample
4. Small and light weight portable type, good for on-site analysis
5. No liquid nitrogen / no cooling water, only 100V power for analysis

Portable, and Best for On-Site Analysis

Application Examples

- Archaeological survey/analysis
- Forensic analysis
- Scrap material identification
- Industrial material R&D evaluation, quality control analysis (plated and/or evaporated film thickness measurement)
- Post waste disposal component analysis (waste disposal regulation)
- Analysis of hazardous heavy metal in soil (for new regulation of urban area soil contamination countermeasure)
- Material study/analysis in university/research institute
- ・・・and, analysis for any form of solid, powder, liquid is possible.

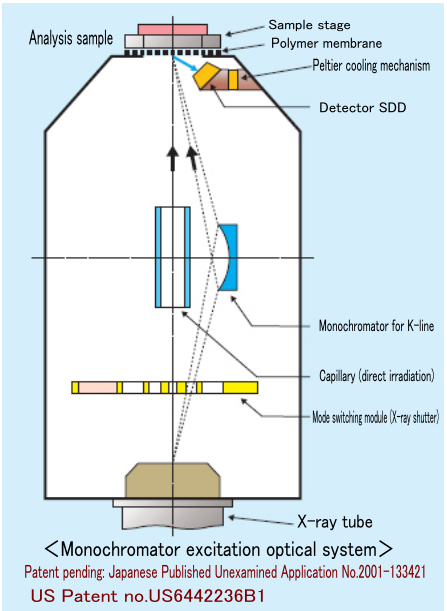


Fruit of Element Technology / High Sensitivity, High Accuracy

Energy Dispersive X-ray Fluorescence Spectrometer makes qualitative and quantitative nondestructive element analysis possible regardless of sample form by measuring fluorescent X-rays which are generated by irradiation of primary X-ray from X-ray tube to a sample through a semiconductor detector.

The semiconductor detector uses silicon drift detector (SDD) with electron cooling system which does not require liquid nitrogen cooling, and then makes high resolution and high counting rate measurement possible by combining with our original digital scaling circuit processor (DSP).

To make an analytical performance higher, an excitation optical system is set with the best condition to get the highest performance of energy resolution and counting sensitivity of the semiconductor detector.



＜Monochromator excitation optical system＞

Patent pending: Japanese Published Unexamined Application No.2001-133421

US Patent no.US6442236B1

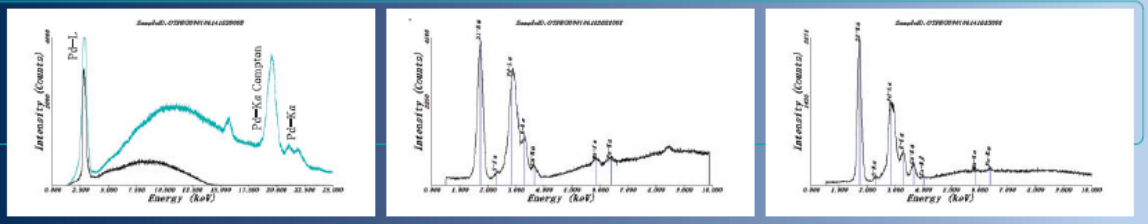
OURSTEX 100FA performs the following measurements with high sensitivity !

For light element measurement, direct irradiation with low voltage eliminates interference by heavy element spectrum, and a Pd-L line is effectively used.

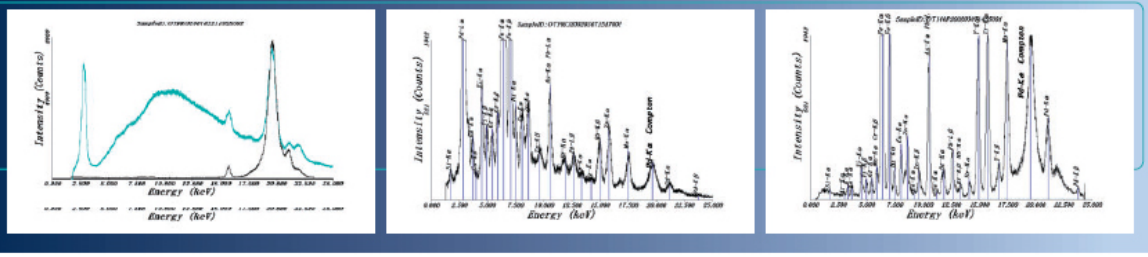
For medium and heavy element measurement, monochoromating a primary X-ray by monochromator and exciting it by K-line of tube target inhibits background noise.

Example of excitation method comparison

Direct method
(tube voltage 15kV)
High sensitive detection of light element



Monochromator method
(tube voltage 40kV)
High efficient excitation
High P/B ratio measurement

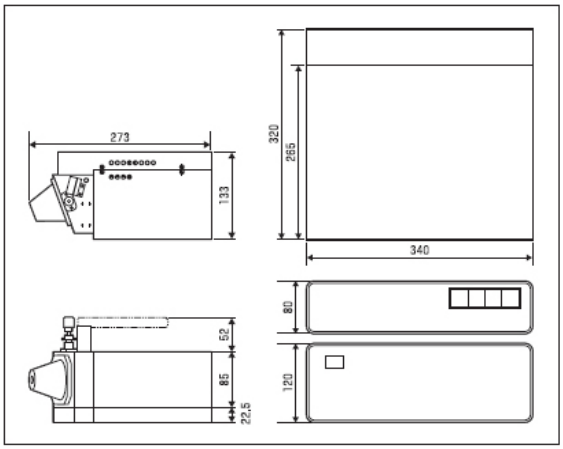


Specification

Measurement principle	Energy Dispersive X-ray Fluorescence Analysis Method
Measuring object	Solid, powder, liquid, thin film, biological sample
Measuring element	12Mg～92U
Sample shape	MAX 35mmφ×35mmH (when sealed) N/A when not sealed
Sample chamber atmosphere	Air (vacuum: optional)
X-ray irradiation radius	～3mmφ
X-ray tube target	Pd
X-ray rated power	40kV-1.75mA, 50W
Detector	Silicon drift detector (SDD)
Scaling circuit	Digital signal processor (DSP)
Analysis software	Automatic qualitative analysis, Calibration curve method quantitative analysis FP method quantitative analysis (optional)

C P U	Notebook Computer (PC/AT compatible)
Other option	Color printer, mouse, carrying case, portable generator, tripod for measuring head retention (with pointer feature), sample cap for vacuum, irradiation box, shielding box, etc.
Use conditions	Temperature:5～30℃ Humidity:20～80% Power:AC100V、5A(50/60Hz) Grounding: D-class grounding ※No need of liquid nitrogen, cooling water, analytical gas, etc.
Outline dimension, mass	Measuring head part：133×170×273mm、3.9kg XG part：320×340×80mm、9.2kg Controller part：265×340×120mm、9.0kg Vacuum pump：190×177×132mm、3.0kg

Dimensional drawing



Configuration

・Measuring part ・XG part ・Controller part ・Vacuum pump ・Accessories

Before an implementation of OURSTEX 100FA, 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 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

06082000