

Portable X-ray Fluorescence Elemental Analyzer

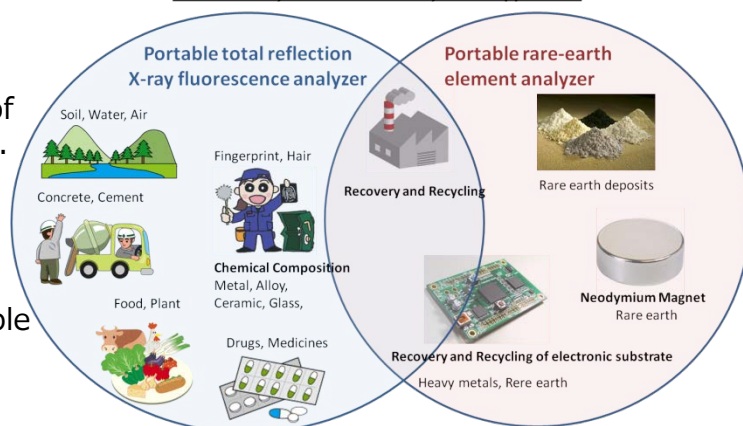
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Description

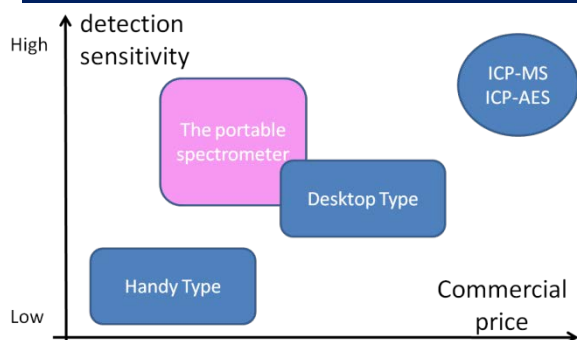
X-ray fluorescence analysis has become an appealing technique for the determination of elemental composition in unknown samples. Although conventional spectrometers have high sensitivity, the size are huge and the commercial price are expensive.

Researchers at Kyoto University have established small-sized, inexpensive, portable x-ray fluorescence spectrometer.

Portable X-ray Fluorescence Analyzer for Application



Portable total reflection x-ray fluorescence analyzer



[Feature]

This portable spectrometer consisted of the low-power X-ray tube, a waveguide-type slit, and a Si PIN photodiode detector only. This accomplish portability, and low cost manufacturing.

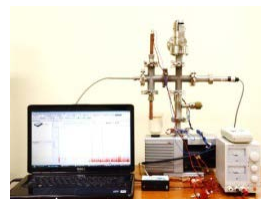
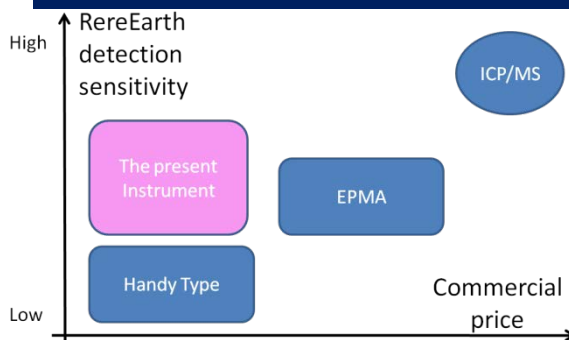
[Spec]

- ① Small sized as A4-size documents
- ② Around 5 kg weight
- ③ Samples should be dissolved in water or water itself.
- ④ Low power consumption

Intellectual Property

- WO2010-026750
- PCT/JP2013/070066

Portable rare-earth element analyzer



[Feature]

A portable rare-earth element analyzer with a palm-top size chamber includes the electron source of a pyroelectric crystal and the sample stage utilizing cathodoluminescence (CL) phenomenon. This analyzer works under low-vacuum with battery.

[Spec]

- ① High sensitivity, ppm~mg
- ② Elements other than rare-earth elements are also measureable by attaching X-ray detector.
- ③ No pretreatment
(Crushed sample is needed in some cases.)
- ④ An elemental mapping by capturing a image using CCD camera

Contact Information

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