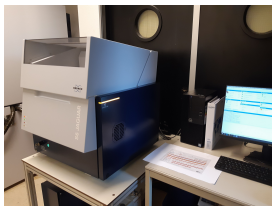
WDXRF spectrometer

https://search.researchequipment.wur.nl/SearchDetail.aspx?deviceid=4e4fe0c0-1095-4e32-843c-49293d8762f9



Brand

Benelux Scientific

Type

S6 JAGUAR

Contact

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Organisation

Agrotechnology & Food Sciences Group

Department

Environmental Technology

Description

X-ray fluorescence is a fast and non-destructive analysis method for the determination of the chemical composition of all kinds of material. (solid, liquid, powder) Qualitative and quantitative analysis with standard less software provides quick quantification of element concentrations. Possible to measure the elements F- U.

Technical Details

Sample sizes
up to 40mm diameter and 38 mm height
Tube
Rhodium, 400 W
Tube Power
50 kV max / 17 mA max
Primary beam filters
Aluminium, 500 µm
Copper, 100 µm
Analyzer crystals
LiF(200) for K-U
PET for Al-Cl
XS-55 for F-Mg
Sample environment
Helium flush for liquid samples
Vacuum for solid samples
Detector
Proportional flow counter
HighSense XE scintillation detector

Applications

• Chemical composition of unknown solid crystalline materials to be able to identify structures with XRD.
• Identification and characterization of elements in crystalline substances such as scorodite, struvite and magnetite.
• Verify the presence of (metal) catalysts and polymer additives (e.g. stabilizers, pigments, etc.) in polymers.
• Quantification of catalyst residue in (intermediate) products.
• Verify leaching of metal particles into reaction media or other (aqueous) solutions.
• Element composition of noble/transition metal based catalysts and their supports (carbons and metal oxides)
• Identify metals and other inorganic particles in plastics.
• Analysis and identification of inorganic matter in biomass (e.g. silicates in straw/grasses, etc.).
• Identification and quantification of residual metal in lignin and carbohydrate samples.
• Quality of food and nutrition products.
• Elemental composition of minerals and ores.
• Analysis of impurities.