THE PLANET. PORTABLE HIGH-RESOLUTION X-RAY POWDER DIFFRACTION

With the PLANET we introduce a portable powder diffractometer with sufficient attainable resolution to identify even the most complex mixtures of minerals.

ON-SITE XRD ANALYSIS FOR GEOLOGY AND MINERALOGY

One of the most important applications of X-ray diffraction is the identification of the phases in soil samples taken during an exploration. Among others the results of these analyses help you decide whether it is worthwhile to return to the site for further investigation.

What if these analyses could be done already in the field?

That would:

• Yield the first results where and when you need them
• Allow a pre-select the sample so that only the promising ones need to be further analysis in the laboratory
• Save an enormous amount of time and costs

For this task we developed the PLANET!

• Compact design and battery operated
• 30W X-ray tube with Cu-anode
• Ultra-sensitive linear detector covering 7° in 2θ

ANGULAR RANGE

The PLANET covers an extraordinary angular range in both incident- and scattering angles, which is unsurpassed by any portable X-ray diffractometer:

• Angle of incidence range: 6.7° to 45°
• Scattering angle: 7° to 120° 2θ
ACCURACY OF PEAK POSITIONS

The PLANET’s accuracy guarantees the resulting scattering angles deviate less than 0.015° from the true value. This is probably the most important parameter for successful phase identifications of complex mixtures.

BACKGROUND LEVEL

With its unique optical system the background levels are reduced significantly compared to existing Seemann-Bohlin based diffractometers.

This helps to determine shallow peaks and improves the detection limits in the field.

A HI-RES SOLUTION IN A SUITCASE

The peaks are measured on LaB6, a well accepted standard to quantify the attainable resolution of a powder diffractometer. Profile fitting of these two peaks shows an FWHM of 0.10° in 2θ.

XPLOREX

Xplorex GmbH develops and produces X-ray analytical systems for quick analysis on-site.

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