

The Hard Metal Specialist

Your competent partner for analytical questions

revierlabor
Essen

Chemische Laboratorien
für Industrie und Umwelt GmbH



Our Company

revierlabor is with more than 40 years of experience in a major corporation leader in the field of hard metal analytics.

Quality, innovation and customer care are the focus of our company. With 25 employees and over 20,000 analyzes per year revierlabor represents for the development of optimal solutions for the most varied tasks in production, R & D, quality assurance and raw material control (for example tungsten, tungsten carbide, tantalum/niobium carbide).

Our Services (Analytics)

Material analysis using:

- X-Ray Fluorescence Analyses (XRF) about Borat technology
- Induktively Coupled Plasma - Optical Emission Spectroscopy (ICP-OES)
- Atomic Absorption (F-AAS and GF-AAS)
- Carrier Gas Hot Extraction (Fusion Technique)

Possible elements:

- Ag, Al, As, B, Be, Bi, C, Ca, Ce, Cg, Co, Cr, Cu, Fe, H, Hf, Hg, Li, Mg, Mn, Mo, N, Na, Nb, Nd, O, P, Pb, Pd, Ru, Sb, Si, Sn, Ta, Te, Ti, V, W, Y, Zn, Zr

Standard package-Hard Metal Analytics:

- C, Co, Cr, Fe, Mn, Mo₂C, N, NbC, Ni, O, TiC, TaC, VC, WC

Special Analytics:

- C-not bounded (C-insoluble), C-bounded (C-soluble)

Sample Requirements

Sintered components or powder with a minimum amount of 5 g.

Raw and intermediate materials about 10 g.

Applications

- Hard metals for roughing and forming technique
- Hard metals for process engineering (mining)
- Cermets
- Hard materials (carbides, nitrides, borides, oxides)
- Ceramic components made of Al₂O₃, SiC, Si₃N₄, ZrO₂
- Semi-finished and finished products from Mo, Nb, Ta, W and their alloys
- Mo-, Nb-, Ta- and W-powder and their chemical compounds
- Cermet powder for example borides, carbides, nitrides

Branches / Industries

- Recycling and disposal
- Mining and foundation engineering
- Tunneling and track construction
- Agriculture and wood processing
- Machines- and plant engineering

Key Data

Detectable concentrations of the elements in raw materials of 0,0001% (ICP, AAS) or 0,03 (XRF-Borat technique) up to 100%.

Relative accuracy of 1-3% for main elements and 5-20% for trace elements.

Standards Excerpt

DIN 51001	General Guideline for XRF
DIN 51418	General Terminology and Basics of XRF
ISO 4503	Hard metals: Determination of the Contents of Metallic Elements by X-Ray Fluorescence - fusion method
ISO 7627/1-6	Hard metals, chemical analysis
ASTM B 890	Standard Test Method for Determination of Metallic Constituents of Tungsten Alloys and Tungsten Hard metals by X-Ray Fluorescence Spectrometry
DIN EN ISO 3908	Not bounded C in Hard Metals



Art

Materials /
Analytics

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