

Well Flow Management

Fluids Sampling and Analysis

Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES)

Expro's ICP-OES provides precise elemental analysis of oil, water, and solid samples, enabling accurate determination of soluble and total cations, as well as elemental species.

Enhanced Sample Preparation Techniques:

To ensure reliable and representative measurements, ICP-OES analysis is supported by advanced sample preparation methods, including:

- Microwave digestion
- Lithium borate fusion
- Ashing, with mass loss assessments at 110°C and 550°C

Applications

- Water characterization for scale and corrosion assessment
- Determination of metal content in crude oil assays
- Analysis of solid and sludge composition
- Arsenic quantification in gas samples
- Heavy metal detection and evaluation



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Element	Aqueous LOD (mg/kg)	Organic LOD (mg/kg)
Ag	0.01	10
Al	0.04	2
As	0.03	
B	0.05	20
Ba	0.02	2
Be	0.0003	
Bi	0.06	
Ca	0.02	3
Cd	0.003	2
Co	0.004	
Cr	0.002	2
Cu	0.004	2
Fe	0.004	2
K	0.3	10
Li	0.007	
Mg	0.01	2
Mn	0.0003	2
Mo	0.003	10
Na	0.1	15
Ni	0.004	2
P	0.04	50
Pb	0.02	20
Rb	0.02	
S	0.2	50
Sb	0.02	
Se	0.03	
Si	0.05	2
Sn	0.02	5
Sr	0.003	
Ti	0.0005	2
Tl	0.03	
V	0.002	2
Zn	0.002	5