CONOSTAN · SCP SCIENCE · ANALYTICHEM

Oil, Fuel & ICP Standards Selection Guide

Choose the right reference standard by analytical technique, test method, matrix and concentration.

1 Start with your technique and test

What you are testing	Technique	Typical methods	Standard to choose
Wear metals and additives in used or new oil	ICP-OES, RDE-OES	ASTM D5185, D6595, IP 501	CONOSTAN S-21 (21 elements) or S-12 (12 elements) multi-element blends in 75 cSt oil, plus single element standards
Military / JOAP wear metal programmes	RDE-OES	MIL-DTL-85694	CONOSTAN D-Series (D3, D12, D19)
Sulfur in crude, residual oil, diesel, gasoline	XRF, UV-fluorescence, ICP	ASTM D2622, D4294, D5453, D7039, D7220	CONOSTAN sulfur CRMs in 9 matrices, 0 to 50,000 ppm
Chlorine in oil	XRF, ICP	Corrosion control, cutting fluids	CONOSTAN chlorine in mineral oil, 10 to 50,000 ppm
Biodiesel B100 / B20 / B5	ICP-OES	ASTM D6751, D7039, EN 14214	Biodiesel multi-element sets (Ca, K, Mg, Na, P)
Hydrocarbons and fuels by GC	GC, GC-SimDis	ASTM D2887, D3606, D4815; DRO, GRO, TPH, VOC	AnalytiChem hydrocarbon neats, solutions and mixes
Physical properties	Titration, viscometry, flash point	ASTM D93, D445, D664, D2896, D7042	CONOSTAN TAN, TBN, viscosity and flash point CRMs (more than 200)
Elements in aqueous samples, water, pharma	ICP-OES, ICP-MS	EPA 200.7, 200.8, 6010; USP <232>/<233>	SCP SCIENCE PlasmaCAL single and multi-element standards

2 Match the matrix

Matrix	Use it for
20 cSt mineral oil	CONOSTAN single element standards (38 elements, mostly 1,000 and 5,000 ppm, 50 g)
75 cSt mineral oil	S-12 and S-21 blends, 10 to 900 ppm
Base oils and PremiSolv™ ICP solvent	Blanks, dilution and matrix matching for metals in oil by ICP
Crude, residual oil, iso-octane, diesel, mineral oil	Sulfur standards matched to your sample type
Nitric / hydrochloric acid	Aqueous ICP standards; PlasmaPURE and Pico-Pure acids for sample preparation

3 Choose concentration, pack and certification

- **Concentration:** bracket your expected sample range, with a blank and at least two calibration levels.
- **Pack size:** single element oil standards come in 50 g; PlasmaCAL in 2 × 25 mL, 125 mL and 500 mL at 1,000, 10,000 and 50,000 µg/mL.
- **Certification:** CONOSTAN single element standards ship with an ISO 17025 compliant Certificate of Analysis; AnalytiChem products are made under ISO 17034, ISO/IEC 17025 and ISO 9001; PlasmaCAL is NIST traceable.
- **Custom blends:** available on request when your method needs a specific element list.

Enquiry checklist

- ☐ Technique and instrument model
- ☐ Test method (ASTM, IP, EN, EPA, USP)
- ☐ Elements or analytes
- ☐ Concentration range
- ☐ Sample matrix
- ☐ Pack size and quantity per year
- ☐ Certification required
- ☐ Delivery location and date

Need help choosing? Send us this checklist and we will recommend the exact product, pack size and lead time.

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