

Biodiesel and Organometallic Oil Standards

- Standards specifically designed for industrial use
- B100 standards meet requirements for ASTM Methods D6751, D5453 and EN14214
- Custom standards also available



Biodiesel and Organometallic Oil Standards

Analytical Standards for Biodiesel

Governments worldwide have passed new regulations that mandate lower levels of sulfur in biodiesel fuel. To coincide with the implementation of these regulations, Spex CertiPrep offers specifically designed Certified Reference Materials (CRMs) for industrial use. Our B100 biodiesel standards meet the requirements for testing ASTM Methods D6751, D5453 and EN14214.

All Spex CertiPrep standards are manufactured from high purity materials and rigorously tested to ensure that our products are high quality. All standards come with a comprehensive Certificate of Analysis. If other concentrations are needed, our chemists can produce custom standards that meet your requirements.



Inorganic Certified
Reference Materials



Analytical Standards for ICP
and ICP-MS Analysis



Supplied with a
Certificate of Analysis



ISO Accredited
Standards

Biodiesel Standards

Biodiesel Standards				
Description	Concentration	Volume	Matrix	Catalog Number
Certified Matrix Blank	–	100 mL	B100	BFBLKY
Certified Matrix Blank	–	500 mL	B100	BFBLKX
Sulfur Standard	5 µg/g	100 mL	B100	BFS5Y
Sulfur Standard	10 µg/g	100 mL	B100	BFS10Y
Sulfur Standard	15 µg/g	100 mL	B100	BFS15Y
Sulfur Standard	20 µg/g	100 mL	B100	BFS20Y
Sulfur Standard	25 µg/g	100 mL	B100	BFS25Y
Sulfur Standard	50 µg/g	100 mL	B100	BFS50Y
Sulfur Standard	100 µg/g	100 mL	B100	BFS100Y
Calcium, Magnesium, Phosphorus, Potassium, Sodium	5 µg/g	100 g	B100	BFM5Y
Calcium, Magnesium, Phosphorus, Potassium, Sodium	10 µg/g	100 g	B100	BFM10Y
Calcium, Magnesium, Phosphorus, Potassium, Sodium	20 µg/g	100 g	B100	BFM20Y

Organometallic Oil Standards

The determination of wear metals in engine oils and other lubricants can be applied to machines such as automobiles, aircraft, heavy equipment, trucks, locomotives, military vehicles, etc., the examples are endless. By tracking metals suspended in used oil, engineers, designers, and mechanics can determine the breakdown of specific engine parts. Specific elements present in the used oils have been found to be directly related to specific engine problems. Engine failures, as well as expensive repairs, can be avoided if engine oils are analyzed, providing a periodic trend to predict maintenance or replacement.

Spex CertiPrep offers a wide range of Organometallic Oil Standards. The benefits and advantages of these standards are many:

- Choice of 37 single elements at 1,000 µg/g and/or 5,000 µg/g
- Popular multi-element blends (23, 21, 12, or 5 elements)
- Clear, transparent mix
- Convenient sizes (50 g or 100 g)
- Competitive pricing
- Certificate of Analysis with every solution
- 1 year expiration date
- Guaranteed stable and accurate
- Expert technical and customer support
- Custom standards available

Organometallic Oil Standards

To ensure validity of results from today's high performance instrumentation, Spex CertiPrep has developed this extensive line of high quality reference materials. While the quality of our standards results directly from the manufacturing and testing requirement of our ISO 9001 Quality System, our comprehensive Certificate of Analysis is critical to confirming and documenting that quality. Therefore, every standard is automatically supplied with a Certificate of Analysis which includes:

- Catalog number
- Lot number
- Matrix statement
- Method of analysis used
- Found concentrations of trace metallic impurities on single-element standards and blanks
- Certified analyte concentration
- Safety Data Sheets (SDS) authorized by safety officer

Spex CertiPrep also offers custom Organometallic Oil Standards because we realize no two labs face exactly the same types of samples or problems, or have precisely the same requirements. Our technical sales specialist will be happy to discuss your applications, combination of elements and concentrations, and your preferred matrices. We will then design the most compatible and stable mixture.

No matter what your application, if you are testing engine oils via ICP-AES, RDE, DCP, AA, or XRF, Spex CertiPrep has reference standards that are pure, defined completely, and accurate to suit your needs. Be assured that our starting materials and solutions meet exacting specifications, that our in-house quality control chemists monitor every phase of manufacturing and that our standards are Triple Checked for Quality[®] using classical and instrumental techniques every step of the way. The result, certified reference materials you need to achieve the promised sensitivity and accuracy of your instrument.

Applications: wear metals, crude oil, additive metals, environmental monitoring, petrochemical testing, pharmaceuticals, food processing, and sulfur in diesel fuel.

Organometallic Oil Standards

Single-Element Organometallic Oil Standards				
Element	Concentration	Volume	Matrix	Catalog Number
Aluminum	1,000 µg/g	50 g	Base Oil 20	ORGAL82Z
Aluminum	5,000 µg/g	50 g	Base Oil 75	ORGAL84Z
Antimony	1,000 µg/g	50 g	Base Oil 20	ORGSB82Z
Arsenic	1,000 µg/g	50 g	Base Oil 75	ORGAS82Z
Barium	1,000 µg/g	50 g	Base Oil 75	ORGBA82Z
Barium	5,000 µg/g	50 g	Base Oil 75	ORGBA84Z
Beryllium	1,000 µg/g	50 g	Base Oil 75	ORGBE82Z
Bismuth	1,000 µg/g	50 g	Base Oil 75	ORGBI82Z
Boron	1,000 µg/g	50 g	Base Oil 75	ORGB82Z
Boron	5,000 µg/g	50 g	Base Oil 75	ORGB84Z
Cadmium	1,000 µg/g	50 g	Base Oil 75	ORGCD82Z
Cadmium	5,000 µg/g	50 g	Base Oil 75	ORGCD84Z
Calcium	1,000 µg/g	50 g	Base Oil 75	ORGCA82Z
Calcium	5,000 µg/g	50 g	Base Oil 75	ORGCA84Z
Chromium	1,000 µg/g	50 g	Base Oil 75	ORGCR82Z
Chromium	5,000 µg/g	50 g	Base Oil 75	ORGCR84Z
Cobalt	1,000 µg/g	50 g	Base Oil 75	ORGCO82Z
Cobalt	5,000 µg/g	50 g	Base Oil 75	ORGCO84Z
Copper	1,000 µg/g	50 g	Base Oil 75	ORGCU82Z
Copper	5,000 µg/g	50 g	Base Oil 75	ORGCU84Z
Iron	1,000 µg/g	50 g	Base Oil 75	ORGFE82Z
Iron	5,000 µg/g	50 g	Base Oil 75	ORGFE84Z
Lead	1,000 µg/g	50 g	Base Oil 75	ORGPB82Z
Lead	5,000 µg/g	50 g	Base Oil 75	ORGPB84Z
Lithium	1,000 µg/g	50 g	Base Oil 20	ORGLI82Z
Lithium	5,000 µg/g	50 g	Base Oil 75	ORGLI84Z
Magnesium	1,000 µg/g	50 g	Base Oil 75	ORGMG82Z
Magnesium	5,000 µg/g	50 g	Base Oil 75	ORGMG84Z
Manganese	1,000 µg/g	50 g	Base Oil 75	ORGMN82Z
Manganese	5,000 µg/g	50 g	Base Oil 75	ORGMN84Z
Mercury	1,000 µg/g	50 g	Base Oil 75	ORGHG82Z

Organometallic Oil Standards

Single-Element Organometallic Oil Standards (cont'd)

Element	Concentration	Volume	Matrix	Catalog Number
Molybdenum	1,000 µg/g	50 g	Base Oil 75	ORGM082Z
Molybdenum	5,000 µg/g	50 g	Base Oil 75	ORGM084Z
Nickel	1,000 µg/g	50 g	Base Oil 75	ORGNI82Z
Nickel	5,000 µg/g	50 g	Base Oil 75	ORGNI84Z
Phosphorus	1,000 µg/g	50 g	Base Oil 75	ORGP82Z
Phosphorus	5,000 µg/g	50 g	Base Oil 75	ORGP84Z
Potassium	1,000 µg/g	50 g	Base Oil 75	ORGK82Z
Potassium	5,000 µg/g	50 g	Base Oil 75	ORGK84Z
Scandium	1,000 µg/g	50 g	Base Oil 75	ORGSC82Z
Selenium	1,000 µg/g	50 g	Base Oil 75	ORGSE82Z
Silicon	1,000 µg/g	50 g	Base Oil 20	ORGSI82Z
Silver	1,000 µg/g	50 g	Base Oil 75	ORGAG82Z
Sodium	1,000 µg/g	50 g	Base Oil 20	ORGNA82Z
Sodium	5,000 µg/g	50 g	Base Oil 75	ORGNA84Z
Sulfur	1,000 µg/g	50 g	Base Oil 75	ORGS82Z
Sulfur	5,000 µg/g	50 g	Base Oil 75	ORGS84Z
Thallium	1,000 µg/g	50 g	Base Oil 20	ORGTL82Z
Tin	1,000 µg/g	50 g	Base Oil 20	ORGSN82Z
Tin	5,000 µg/g	50 g	Base Oil 75	ORGSN84Z
Titanium	1,000 µg/g	50 g	Base Oil 20	ORGTI82Z
Titanium	5,000 µg/g	50 g	Base Oil 75	ORGTI84Z
Vanadium	1,000 µg/g	50 g	Base Oil 75	ORGV82Z
Vanadium	5,000 µg/g	50 g	Base Oil 75	ORGV84Z
Zinc	1,000 µg/g	50 g	Base Oil 20	ORGZN82Z
Zinc	5,000 µg/g	50 g	Base Oil 75	ORGZN84Z
Zirconium	1,000 µg/g	50 g	Base Oil 20	ORGZR82Z
Zirconium	5,000 µg/g	50 g	Base Oil 75	ORGZR84Z

Organometallic Oil Standards

Sulfur Oil Standards				
Description	Concentration	Volume	Matrix	Catalog Number
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	1,000 µg/g	100 g	Base Oil 20	DSS82Y
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	750 µg/g	100 g	Base Oil 20	DSS81BY
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	500 µg/g	100 g	Base Oil 20	DSS81AY
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	300 µg/g	100 g	Base Oil 20	DSS8CY
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	200 µg/g	100 g	Base Oil 20	DSS8BY
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	100 µg/g	100 g	Base Oil 20	DSS81Y
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	75 µg/g	100 g	Base Oil 20	DSS875Y
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	50 µg/g	100 g	Base Oil 20	DSS8AY
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	25 µg/g	100 g	Base Oil 20	DSS825Y
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	20 µg/g	100 g	Base Oil 20	DSS820Y
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	15 µg/g	100 g	Base Oil 20	DSS815Y
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	10 µg/g	100 g	Base Oil 20	DSS810Y
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	5 µg/g	100 g	Base Oil 20	DSS85Y
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	0 µg/g	100 g	Base Oil 20	DSS8Y

Set for 8 Sulfur Oil Standards				
Description	Concentration	Volume	Matrix	Catalog Number
Sulfur	1,000 µg/g	100 g	Base Oil 20	DSS8SET
	750 µg/g	100 g		
	500 µg/g	100 g		
	300 µg/g	100 g		
	200 µg/g	100 g		
	100 µg/g	100 g		
	50 µg/g	100 g		
	BASE20	500 mL		

Organometallic Oil Standards

Sulfur Oil Standards for Diesel Fuel Analysis				
Description	Concentration	Volume	Matrix	Catalog Number
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	1,000 µg/g	100 g	#2 Diesel Fuel	SDFS1000Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	750 µg/g	100 g	#2 Diesel Fuel	SDFS750Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	500 µg/g	100 g	#2 Diesel Fuel	SDFS500Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	400 µg/g	100 g	#2 Diesel Fuel	SDFS400Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	300 µg/g	100 g	#2 Diesel Fuel	SDFS300Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	200 µg/g	100 g	#2 Diesel Fuel	SDFS200Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	100 µg/g	100 g	#2 Diesel Fuel	SDFS100Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	75 µg/g	100 g	#2 Diesel Fuel	SDFS75Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	50 µg/g	100 g	#2 Diesel Fuel	SDFS50Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	25 µg/g	100 g	#2 Diesel Fuel	SDFS25Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	20 µg/g	100 g	#2 Diesel Fuel	SDFS20Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	15 µg/g	100 g	#2 Diesel Fuel	SDFS15Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	10 µg/g	100 g	#2 Diesel Fuel	SDFS10Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	5 µg/g	100 g	#2 Diesel Fuel	SDFS5Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	0 µg/g	100 g	#2 Diesel Fuel	SDFSBLKY

Set for Ultra Low Level Sulfur Standards				
Description	Concentration	Volume	Matrix	Catalog Number
Sulfur	100 µg/g	100 mL	#2 Diesel Fuel	SDFSSET
	50 µg/g	100 mL		
	25 µg/g	100 mL		
	20 µg/g	100 mL		
	15 µg/g	100 mL		
	10 µg/g	100 mL		
	5 µg/g	100 mL		

Organometallic Oil Standards

Multi-Element Organometallic Oil Standards					
Description	Analytes in Base Oil	Concentration	Volume	Matrix	Catalog Number
23 Element Standard	Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Si, Sn, Ti, V, Zn	900 µg/g	50 g	Base Oil 75	S23900Z
23 Element Standard	Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Si, Sn, Ti, V, Zn	900 µg/g	100 g	Base Oil 75	S23900Y
23 Element Standard	Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Si, Sn, Ti, V, Zn	500 µg/g	50 g	Base Oil 75	S23500Z
23 Element Standard	Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Si, Sn, Ti, V, Zn	500 µg/g	100 g	Base Oil 75	S23500Y
23 Element Standard	Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Si, Sn, Ti, V, Zn	300 µg/g	50 g	Base Oil 75	S23300Z
23 Element Standard	Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Si, Sn, Ti, V, Zn	300 µg/g	100 g	Base Oil 75	S23300Y
23 Element Standard	Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Si, Sn, Ti, V, Zn	100 µg/g	50 g	Base Oil 75	S23100Z
23 Element Standard	Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Si, Sn, Ti, V, Zn	100 µg/g	100 g	Base Oil 75	S23100Y
21 Element Standard	Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, Mg, Mn, Mo, Na, Ni, P, Pb, Si, Sn, Ti, V, Zn	900 µg/g	50 g	Base Oil 75	S21900Z
21 Element Standard	Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, Mg, Mn, Mo, Na, Ni, P, Pb, Si, Sn, Ti, V, Zn	900 µg/g	100 g	Base Oil 75	S21900Y
21 Element Standard	Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, Mg, Mn, Mo, Na, Ni, P, Pb, Si, Sn, Ti, V, Zn	500 µg/g	50 g	Base Oil 75	S21500Z
21 Element Standard	Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, Mg, Mn, Mo, Na, Ni, P, Pb, Si, Sn, Ti, V, Zn	500 µg/g	100 g	Base Oil 75	S21500Y
21 Element Standard	Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, Mg, Mn, Mo, Na, Ni, P, Pb, Si, Sn, Ti, V, Zn	300 µg/g	50 g	Base Oil 75	S21300Z
21 Element Standard	Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, Mg, Mn, Mo, Na, Ni, P, Pb, Si, Sn, Ti, V, Zn	300 µg/g	100 g	Base Oil 75	S21300Y
21 Element Standard	Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, Mg, Mn, Mo, Na, Ni, P, Pb, Si, Sn, Ti, V, Zn	100 µg/g	50 g	Base Oil 75	S21100Z
21 Element Standard	Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, Mg, Mn, Mo, Na, Ni, P, Pb, Si, Sn, Ti, V, Zn	100 µg/g	100 g	Base Oil 75	S21100Y

Organometallic Oil Standards

Multi-Element Organometallic Oil Standards (cont'd)					
Description	Analytes in Base Oil	Concentration	Volume	Matrix	Catalog Number
12 Element Standard	Ag, Al, Cr, Cu, Fe, Mg, Na, Ni, Pb, Si, Sn, Ti	900 µg/g	50 g	Base Oil 75	S12900Z
12 Element Standard	Ag, Al, Cr, Cu, Fe, Mg, Na, Ni, Pb, Si, Sn, Ti	900 µg/g	100 g	Base Oil 75	S12900Y
12 Element Standard	Ag, Al, Cr, Cu, Fe, Mg, Na, Ni, Pb, Si, Sn, Ti	500 µg/g	50 g	Base Oil 75	S12500Z
12 Element Standard	Ag, Al, Cr, Cu, Fe, Mg, Na, Ni, Pb, Si, Sn, Ti	100 µg/g	50 g	Base Oil 75	S12100Z
12 Element Standard	Ag, Al, Cr, Cu, Fe, Mg, Na, Ni, Pb, Si, Sn, Ti	100 µg/g	100 g	Base Oil 75	S12100Y
5 Element Standard	Ba, Ca, Mg, P, Zn	5,000 µg/g	50 g	Base Oil 75	AM5000Z
5 Element Standard	Ba, Ca, Mg, P, Zn	5,000 µg/g	100 g	Base Oil 75	AM5000Y
5 Element Standard	Ba, Ca, Mg, P, Zn	1,000 µg/g	50 g	Base Oil 75	AM1000Z
5 Element Standard	Ba, Ca, Mg, P, Zn	1,000 µg/g	100 g	Base Oil 75	AM1000Y
5 Element Standard	Ba, Ca, Mg, P, Zn	900 µg/g	50 g	Base Oil 75	AM900Z
5 Element Standard	Ba, Ca, Mg, P, Zn	900 µg/g	100 g	Base Oil 75	AM900Y

Base Oils in Kerosene Blanks		
Description	Volume	Catalog Number
Base Oil 20	500 mL	BASE20
Base Oil 20	3.78 L	BASE20G
Base Oil 75	500 mL	BASE75
Base Oil 75	3.78 L	BASE75G
Kerosene	500 mL	KERBLK
Kerosene	3.78 L	KERBLKG

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