

Since 1954, SPEX CertiPrep is the industry leader in the CRM marketplace meeting the needs of laboratories worldwide with innovation and research. Accredited by A2LA to ISO/IEC 17025:2017 & ISO 17034:2016. Certified by DQS to ISO 9001:2015.

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 now 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 materials of the highest purity and rigorously tested to ensure that our products are of the highest 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.

For additional product information, please visit www.spexcertiprep.com.

Biodiesel Standards

Description	Concentration	Volume	Matrix	Part #
Certified Matrix Blank B100	-	100 mL	B100	BF-BLKY
Certified Matrix Blank B100	-	500 mL	B100	BF-BLXX
Sulfur in B100	5 µg/g	100 mL	B100	BFS-5Y
Sulfur in B100	10 µg/g	100 mL	B100	BFS-10Y
Sulfur in B100	15 µg/g	100 mL	B100	BFS-15Y
Sulfur in B100	20 µg/g	100 mL	B100	BFS-20Y
Sulfur in B100	25 µg/g	100 mL	B100	BFS-25Y
Sulfur in B100	50 µg/g	100 mL	B100	BFS-50Y
Sulfur in B100	100 µg/g	100 mL	B100	BFS-100Y
Ca, K, Mg, Na, and P in B100	5 µg/g	100 g	B100	BFM-5Y
Ca, K, Mg, Na, and P in B100	10 µg/g	100 g	B100	BFM-10Y
Ca, K, Mg, Na, and P in B100	20 µg/g	100 g	B100	BFM-20Y

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 the 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 1,000 and/or 5,000 µg/g
- Popular multi-element blends (23, 21, 12, or 5 elements)
- Clear, transparent matrix
- 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

To ensure the 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 and 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 matrix. 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 Sulfur in Diesel Fuel

For additional product information, please visit www.spexcertiprep.com/inorganic-standards/organometallic-oil-standards.

Biodiesel and Organometallic Oil Standards

Single-Element Organometallic Oil Standards				
Analyte in Base Oil	Concentration	Volume	Matrix	Part #
Aluminum (Al)	1,000 µg/g	50 g	Base Oil 20	ORG-AL8-2Z
Aluminum (Al)	5,000 µg/g	50 g	Base Oil 75	ORG-AL8-4Z
Antimony (Sb)	1,000 µg/g	50 g	Base Oil 20	ORG-SB8-2Z
Arsenic (As)	1,000 µg/g	50 g	Base Oil 75	ORG-AS8-2Z
Barium (Ba)	1,000 µg/g	50 g	Base Oil 75	ORG-BA8-2Z
Barium (Ba)	5,000 µg/g	50 g	Base Oil 75	ORG-BA8-4Z
Beryllium (Be)	1,000 µg/g	50 g	Base Oil 75	ORG-BE8-2Z
Bismuth (Bi)	1,000 µg/g	50 g	Base Oil 75	ORG-BI8-2Z
Boron (B)	1,000 µg/g	50 g	Base Oil 75	ORG-B8-2Z
Boron (B)	5,000 µg/g	50 g	Base Oil 75	ORG-B8-4Z
Cadmium (Cd)	1,000 µg/g	50 g	Base Oil 75	ORG-CD8-2Z
Cadmium (Cd)	5,000 µg/g	50 g	Base Oil 75	ORG-CD8-4Z
Calcium (Ca)	1,000 µg/g	50 g	Base Oil 75	ORG-CA8-2Z
Calcium (Ca)	5,000 µg/g	50 g	Base Oil 75	ORG-CA8-4Z
Chromium (Cr)	1,000 µg/g	50 g	Base Oil 75	ORG-CR8-2Z
Chromium (Cr)	5,000 µg/g	50 g	Base Oil 75	ORG-CR8-4Z
Cobalt (Co)	1,000 µg/g	50 g	Base Oil 75	ORG-CO8-2Z
Cobalt (Co)	5,000 µg/g	50 g	Base Oil 75	ORG-CO8-4Z
Copper (Cu)	1,000 µg/g	50 g	Base Oil 75	ORG-CU8-2Z
Copper (Cu)	5,000 µg/g	50 g	Base Oil 75	ORG-CU8-4Z
Iron (Fe)	1,000 µg/g	50 g	Base Oil 75	ORG-FE8-2Z
Iron (Fe)	5,000 µg/g	50 g	Base Oil 75	ORG-FE8-4Z
Lead (Pb)	1,000 µg/g	50 g	Base Oil 75	ORG-PB8-2Z
Lead (Pb)	5,000 µg/g	50 g	Base Oil 75	ORG-PB8-4Z
Lithium (Li)	1,000 µg/g	50 g	Base Oil 20	ORG-LI8-2Z
Lithium (Li)	5,000 µg/g	50 g	Base Oil 75	ORG-LI8-4Z
Magnesium (Mg)	1,000 µg/g	50 g	Base Oil 75	ORG-MG8-2Z
Magnesium (Mg)	5,000 µg/g	50 g	Base Oil 75	ORG-MG8-4Z
Manganese (Mn)	1,000 µg/g	50 g	Base Oil 75	ORG-MN8-2Z
Manganese (Mn)	5,000 µg/g	50 g	Base Oil 75	ORG-MN8-4Z
Mercury (Hg)	1,000 µg/g	50 g	Base Oil 75	ORG-HG8-2Z
Molybdenum (Mo)	1,000 µg/g	50 g	Base Oil 75	ORG-MO8-2Z
Molybdenum (Mo)	5,000 µg/g	50 g	Base Oil 75	ORG-MO8-4Z
Nickel (Ni)	1,000 µg/g	50 g	Base Oil 75	ORG-NI8-2Z
Nickel (Ni)	5,000 µg/g	50 g	Base Oil 75	ORG-NI8-4Z
Phosphorus (P)	1,000 µg/g	50 g	Base Oil 75	ORG-P8-2Z
Phosphorus (P)	5,000 µg/g	50 g	Base Oil 75	ORG-P8-4Z
Potassium (K)	1,000 µg/g	50 g	Base Oil 75	ORG-K8-2Z
Potassium (K)	5,000 µg/g	50 g	Base Oil 75	ORG-K8-4Z
Scandium (Sc)	1,000 µg/g	50 g	Base Oil 75	ORG-SC8-2Z
Selenium (Se)	1,000 µg/g	50 g	Base Oil 75	ORG-SE8-2Z
Silicon (Si)	1,000 µg/g	50 g	Base Oil 20	ORG-SI8-2Z
Silver (Ag)	1,000 µg/g	50 g	Base Oil 75	ORG-AG8-2Z
Sodium (Na)	1,000 µg/g	50 g	Base Oil 20	ORG-NA8-2Z
Sodium (Na)	5,000 µg/g	50 g	Base Oil 75	ORG-NA8-4Z
Sulfur (S)	1,000 µg/g	50 g	Base Oil 75	ORG-S8-2Z
Sulfur (S)	5,000 µg/g	50 g	Base Oil 75	ORG-S8-4Z

Biodiesel and Organometallic Oil Standards

Single-Element Organometallic Oil Standards (cont'd)

Thallium (Tl)	1,000 µg/g	50 g	Base Oil 20	ORG-TL8-2Z
Tin (Sn)	1,000 µg/g	50 g	Base Oil 20	ORG-SN8-2Z
Tin (Sn)	5,000 µg/g	50 g	Base Oil 75	ORG-SN8-4Z
Titanium (Ti)	1,000 µg/g	50 g	Base Oil 20	ORG-TI8-2Z
Titanium (Ti)	5,000 µg/g	50 g	Base Oil 75	ORG-TI8-4Z
Vanadium (V)	1,000 µg/g	50 g	Base Oil 75	ORG-V8-2Z
Vanadium (V)	5,000 µg/g	50 g	Base Oil 75	ORG-V8-4Z
Zinc (Zn)	1,000 µg/g	50 g	Base Oil 20	ORG-ZN8-2Z
Zinc (Zn)	5,000 µg/g	50 g	Base Oil 75	ORG-ZN8-4Z
Zirconium (Zr)	1,000 µg/g	50 g	Base Oil 20	ORG-ZR8-2Z
Zirconium (Zr)	5,000 µg/g	50 g	Base Oil 75	ORG-ZR8-4Z

Sulfur Oil Standards for Diesel Fuel Analysis

For determination of sulfur in diesel fuel. Standards are designed for use with ASTM Method D2622, standard test method for sulfur in petroleum products.

Sulfur Oil Standards

Description	Concentration	Volume	Matrix	Part #
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	1,000 µg/g	100 g	Base Oil 20	DSS8-2Y
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	750 µg/g	100 g	Base Oil 20	DSS8-1BY
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	500 µg/g	100 g	Base Oil 20	DSS8-1AY
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	300 µg/g	100 g	Base Oil 20	DSS8-CY
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	200 µg/g	100 g	Base Oil 20	DSS8-BY
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	100 µg/g	100 g	Base Oil 20	DSS8-1Y
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	75 µg/g	100 g	Base Oil 20	DSS8-75Y
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	50 µg/g	100 g	Base Oil 20	DSS8-AY
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	25 µg/g	100 g	Base Oil 20	DSS8-25Y
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	20 µg/g	100 g	Base Oil 20	DSS8-20Y
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	15 µg/g	100 g	Base Oil 20	DSS8-15Y
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	10 µg/g	100 g	Base Oil 20	DSS8-10Y
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	5 µg/g	100 g	Base Oil 20	DSS8-5Y
Sulfur Oil Standards for Diesel Fuel Analysis in Base Oil	0 µg/g	100 g	Base Oil 20	DSS8-Y

Set for Sulfur Standards

Description	Concentration	Volume	Matrix	Part #
Set for Sulfur Standards	1,000 µg/g	100 g	Base Oil 20	DSS8-SET
	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		

Biodiesel and Organometallic Oil Standards

Sulfur Oil Standards for Diesel Fuel Analysis

Description	Concentration	Volume	Matrix	Part #
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	1,000 µg/g	100 g	#2 Diesel Fuel	SDFS-1000-Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	750 µg/g	100 g	#2 Diesel Fuel	SDFS-750-Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	500 µg/g	100 g	#2 Diesel Fuel	SDFS-500-Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	400 µg/g	100 g	#2 Diesel Fuel	SDFS-400-Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	300 µg/g	100 g	#2 Diesel Fuel	SDFS-300-Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	200 µg/g	100 g	#2 Diesel Fuel	SDFS-200-Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	100 µg/g	100 g	#2 Diesel Fuel	SDFS-100-Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	75 µg/g	100 g	#2 Diesel Fuel	SDFS-75-Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	50 µg/g	100 g	#2 Diesel Fuel	SDFS-50-Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	25 µg/g	100 g	#2 Diesel Fuel	SDFS-25-Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	20 µg/g	100 g	#2 Diesel Fuel	SDFS-20-Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	15 µg/g	100 g	#2 Diesel Fuel	SDFS-15-Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	10 µg/g	100 g	#2 Diesel Fuel	SDFS-10-Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	5 µg/g	100 g	#2 Diesel Fuel	SDFS-5-Y
Sulfur Oil Standards for Diesel Fuel Analysis in #2 Diesel Fuel	0 µg/g	100 g	#2 Diesel Fuel	SDFS-BLK-Y

Set for Ultra Low Level Sulfur Standards

Description	Concentration	Volume	Matrix	Part #
Set for Ultra Low Level Sulfur Standards	100 µg/g		#2 Diesel Fuel	SDFS-SET
	50 µg/g			
	25 µg/g			
	15 µg/g			
	10 µg/g			
	5 µg/g			
	0 µg/g			

Multi-Element Organometallic Oil Standards

Description	Analytes in Base Oil	Concentration	Volume	Matrix	Part #
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	S23-900Z
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	S23-900Y
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	S23-500Z
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	S23-500Y
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	S23-300Z
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	S23-300Y
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	S23-100Z
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	S23-100Y
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	S21-900Z

Biodiesel and Organometallic Oil Standards

Multi-Element Organometallic Oil Standard (cont'd)					
Description	Analytes in Base Oil	Concentration	Volume	Matrix	Part #
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	S21-900Y
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	S21-500Z
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	S21-500Y
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	S21-300Z
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	S21-300Y
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	S21-100Z
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	S21-100Y
12 Element Standard	Ag, Al, Cr, Cu, Fe, Mg, Na, Ni, Pb, Si, Sn, Ti	900 µg/g	50 g	Base Oil 75	S12-900Z
12 Element Standard	Ag, Al, Cr, Cu, Fe, Mg, Na, Ni, Pb, Si, Sn, Ti	900 µg/g	100 g	Base Oil 75	S12-900Y
12 Element Standard	Ag, Al, Cr, Cu, Fe, Mg, Na, Ni, Pb, Si, Sn, Ti	500 µg/g	50 g	Base Oil 75	S12-500Z
12 Element Standard	Ag, Al, Cr, Cu, Fe, Mg, Na, Ni, Pb, Si, Sn, Ti	100 µg/g	50 g	Base Oil 75	S12-100Z
12 Element Standard	Ag, Al, Cr, Cu, Fe, Mg, Na, Ni, Pb, Si, Sn, Ti	100 µg/g	100 g	Base Oil 75	S12-100Y
5 Element Standard	Ba, Ca, Mg, P, Zn	5,000 µg/g	50 g	Base Oil 75	AM-5000Z
5 Element Standard	Ba, Ca, Mg, P, Zn	5,000 µg/g	100 g	Base Oil 75	AM-5000Y
5 Element Standard	Ba, Ca, Mg, P, Zn	1,000 µg/g	50 g	Base Oil 75	AM-1000Z
5 Element Standard	Ba, Ca, Mg, P, Zn	1,000 µg/g	100 g	Base Oil 75	AM-1000Y
5 Element Standard	Ba, Ca, Mg, P, Zn	900 µg/g	50 g	Base Oil 75	AM-900Z
5 Element Standard	Ba, Ca, Mg, P, Zn	900 µg/g	100 g	Base Oil 75	AM-900Y

Base Oils and Kerosene Blanks		
Description	Volume	Part #
Base Oil 20	500 mL	BASE20
Base Oil 20	3.78 L	BASE20-G
Base Oil 75	500 mL	BASE75
Base Oil 75	3.78 L	BASE75-G
Kerosene	500 mL	KER-BLK
Kerosene	3.78 L	KER-BLK-G

Base oil 20 and 75 are the same certified base oils that are used in our single and multi-element blends.

CAN'T FIND THE STANDARDS YOU ARE LOOKING FOR?

SPEX CertiPrep can make custom standards to meet your exact needs. Contact us for more information.

Contact Us

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