



Standards

2023 Catalog



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ANSI National Accreditation Board

A C C R E D I T E D

ISO 17034

**REFERENCE MATERIAL
PRODUCER**



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www.asistandards.com



You Question Everything...

Let Us Help Validate
Your Answers

From simple, single-element standards to complex multi-element sets, ASI Standards is your trusted source for calibration materials.

We specialize in the custom formulation of calibration standards. We can modify any set or create a custom set based on customer specifications. All standards verified on appropriate instrumentation and include a Certificate of Analysis indicating traceability to NIST reference materials and ASTM methods when available. Shelf life and uncertainty information is also included.

Our brand new state-of-the-art production facility is located in Oak Ridge North / The Woodlands, Texas - we can ship our products anywhere in the world.



Capabilities

Technical Assistance

Special Projects

World-wide shipping, including Dangerous Goods (DG) classification

Same day or next day shipping on stock sets

Products

Sulfur and other elements in a variety of non-aqueous matrices

Multi-Elements in Lubricating Oils and Residual Oils

Ultra Low Sulfur Standards for EPA regulations

Nitrogen and Sulfur Ampoules for UV Fluorescence and Chemiluminescence instruments

Sulfur and Metals in Oil

Sulfur-Free Wear Metal Standards- Organometallic for XRF, AA, ICP or AE applications

Single-Element Organometallic Standards (ORM)

Liquid Organometallic Solutions (LOMS)

Internal Standards

Titration Standards

PE and PVC Standards for RoHS/WEEE in Disc Form

Physical Testing Standards

Ordering Information

Ordering/Product Info/Technical Info

Toll Free in the USA: +1 (866) 419-9229
Outside the USA: +1 (281) 419-9229
Fax: +1 (281) 419-9229
E-Mail: sales@asistandards.com
Website: www.asistandards.com

Shipments

- FOB Oak Ridge North TX 77385 USA
- All products packaged in accordance with applicable shipper.
- GHS DOT and IATA compliant
- Stock items and Chemplex consumables generally ship within 24 hours. All others within 5 to 10 business days
- Expedited shipping is available at additional charge
- We ship with UPS, FedEx and other carriers as requested
- Please check all materials upon arrival and handle in a safe and appropriate manner.

Payment and Terms Options

- Net 30 days
- Pro Forma Invoice
- Electronic Transfer: (call or e-mail for transfer information)
- Checks drawn on US banks only
- All payments in USD
- We accept the following credit cards:
Mastercard, VISA and American Express

Pricing

- All pricing expressed in USD
- Pricing subject to change without prior notice

Returns

- All standards are 100% guaranteed. Should you need to return something, a 25% restocking fee may apply, please call us to make appropriate arrangements

Physical Address:

27635 Commerce Oaks Drive
Oak Ridge North, Texas 77385

Accounts Receivable:

P.O. Box 86179
Baton Rouge, LA 70879

Telephone: +1 (225) 752-5987

Fax: +1 (225) 752-5987

ASI Quality Policy



ISO 9001

The management system of ASI Standards is certified to ISO 9001

ASI Standards is committed to producing laboratory instrument calibration standards and reference materials, accurately and in a timely manner, for the petrochemical, lube oil, crude oil and polymers industries.

To demonstrate our commitment to product excellence and our focus on customer service, ASI Standards has developed and implemented a formal quality management system, based on compliance with requirements of the ISO 9001 standard.

The management and staff of ASI Standards are committed to complying with requirements and continually improving the effectiveness of our quality management system.



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Certificate of Analysis

ASI Standards

Certificate of Analysis

**Sulfur in Mineral Oil
Calibration Standards**

Product Code:

SMO10(HL)

Expiration date:

April 8, 2017

Lot Number:

040815BX

Standard Number	Lot Number	Concentration wt %	Expanded Degree of Uncertainty
1	040815BX-1	0.000	0.0000
2	040815BX-2	0.100	0.0008
3	040815BX-3	0.200	0.002
4	040815BX-4	0.500	0.004
5	040815BX-5	0.750	0.006
6	040815BX-6	1.000	0.008
7	040815BX-7	2.000	0.02
8	040815BX-8	3.000	0.02
9	040815BX-9	4.000	0.03
10	040815BX-10	5.000	0.04
Standard deviation (2-Sigma): 0.8 % (Relative)			Density: 0.83 g/mL

These standards were checked by x-ray fluorescence spectrometry, (XRF) method ASTM D2622, and are traceable to NIST SRM 2723a (sulfur in diesel fuel oil), NIST SRM # 1616a (sulfur in kerosene), NIST SRM # 2717a (sulfur in residual fuel oil), NIST SRM 2721 (sulfur in crude oil) or NIST SRM # 2724b (sulfur in diesel fuel oil).

ASI Standards

Chris Carolan
Chris Carolan
Production and Quality Control Mgr

NIST Traceability provided on final standards when applicable. May depend on NIST Standard availability.

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Stability or "shelf life" of the final standard.

The lot number is a unique product identifier. Often used for reordering and technical assistance.

Uncertainty determined using EURACHEM/CITAC Guide. Type A and Type B factors are included to report a combined uncertainty. Normal distribution is assumed.

Approximate density provided to assist with matrix differences and other instrument software adjustments..

Uncertainty determined using EURACHEM/CITAC Guide. Type A and Type B factors are included to report a combined uncertainty. Normal distribution is assumed.

Concentration units. Very important to ensure you get what you ask for

Certificate of Analysis



1. **Quality Documentation:** This certificate is designed in accordance with ISO guide 31 (Reference Materials - Contents of Certificates and Labels) and ISO Guide 35 (Reference Materials - General and Statistical Principles for Certification).
2. **Quality Standards:** ISO 9001:2008 Quality Management System - Requirements SAI Global Registrations Certificate Number CERT 0065624
3. **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under section 11. If dilution is required use Class A Glassware and diluent compatible with all certified analytes in this preparation. All solutions should be thoroughly mixed prior to use.
4. **Raw Materials:** Reference Standards are prepared from the highest quality starting materials with defined purities. All analytes and solvents are obtained from pre-qualified vendors and then analyzed or evaluated prior to use.
5. **Manufacturing:** All Balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Class A glassware is used in the manufacture and quality control of all standards and calibrated using an in-house procedure. Good Laboratory Practices have been used throughout the preparation of this CRM. Please refer to the nist test number listed on the front of this certificate.
6. **Homogeneity Assessment:** Homogeneity of the finished product is assessed by analyzing sample batches or by other methods consistent with the intended use of the product and by procedures that comply with the appropriate Quality System requirements.
7. **Stability Assessment:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label when handled and stored according to the conditions stated on the label. To ensure a uniform solution, mix the contents of the sealed container prior to use. Care should be taken not to contaminate the contents of the original container.
8. **Analytical Quality Control:** Products are tested by validated analytical methods specified in the manufacturer's Quality Management System.
9. **Uncertainty Statistics and Confidence Limits:** The Uncertainty values as stated on the face of this certificate have been determined using EURACHEM/CITAC Guide (Quantifying Uncertainty in Analytical Measurement). We have evaluated both Type A (based on a series of observations) and Type B (manufacturers specifications and calibration data) factors and report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula $\sqrt{u(P)^2 + (u(m))^2 + (u(V))^2}$. The expanded uncertainty, U, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level. For analysis, the certified value should be used as the actual value.

10. Warranties: The Manufacturer warrants that its products shall conform to the description of such products as provided in its catalog or on specific product label. This warranty is exclusive, and the manufacturer makes no other warranty, express or implied, including any implied warranty of merchantability or fitness for any particular purpose.

11. Legal Notice and limit of liability: This product is for routine laboratory analysis and research purposes only. Due to the hazardous nature, only trained personnel should handle this product. The Company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

Our Standards are traceable to various NIST SRMs

Element	Nist SRM	Element	Nist SRM
Ag	1077a	Li	3129a
Al	1075a	Mg	3131a
As	3103a	Mn	3132
Au	3121	Mo	3134
B	3107	Na	1069b
Ba	1051b	Ni	1065b
Be	3105a	P	3139a
Bi	3106	Pb	1059c
Br	3184	Pt	3140
Ca	3109a	S	2724b
Cd	1053a	Sb	3102a
Ce	3110	Se	3149
Cl	1818a	Si	1066a
Co	3113	Sn	1057b
Cr	1078b	Sr	3153a
Cu	1080a	Ti	3162a
Fe	1079b	Tl	3158
Ga	3119a	V	1052b
Hg	3133	Y	3167a
K	3141a	Zn	3168a
		Zr	3169

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Sulfur Calibration Sets



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Customization of Catalog Sets Available

Sulfur Calibration Sets

Sulfur source is Di-n-butyl sulfide unless otherwise specified.

Suitable for ASTM Methods D2622, D4294, D5453, D6334, D7039, D7212, D7220, ISO/CD 14596

All sets contain 100 ml bottles, unless otherwise specified

Product Code		SMO10	Standard Number		Sulfur Wt%
Product	Sulfur in Mineral Oil		1		0.0000
Test Method	D2622 D4294		2		0.0025
			3		0.0050
			4		0.0100
			5		0.0200
			6		0.0400
Description	Sulfur in Mineral Oil Set of 10 Calibration Standards		7		0.0500
			8		0.0600
			9		0.0800
			10		0.1000
Product Code		SMO-50	Product Code		SMO-500
Description	Sulfur in Mineral Oil Check Standard		Description	Sulfur in Mineral Oil Check Standard	
Sulfur wt%	0.0050		Sulfur wt%	0.0500	

Pricing subject to change without prior notice

Sulfur Calibration Sets

Product Code		SMO10 (HL)	Standard Number		Sulfur Wt%
Product	Sulfur in Mineral Oil		1		0.0000
Test Method	D2622 D4294		2		0.1000
			3		0.2000
			4		0.5000
			5		0.7500
			6		1.0000
Description	Sulfur in Mineral Oil High level Set of 10 Calibration Standards		7		2.0000
			8		3.0000
			9		4.0000
			10		5.0000
Product Code		SMO-1.00	Product Code		SMO-3.00
Description	Sulfur in Mineral Oil Check Standard		Description	Sulfur in Mineral Oil Check Standard	
Sulfur wt%	1.00		Sulfur wt%	3.00	



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Customization of Catalog Sets Available

Sulfur Calibration Sets

Product Code		SM011	Standard Number		Sulfur Wt%		
Product	Sulfur in Mineral Oil		1		0.0000		
Test Method	D2622 D4294		2		0.0020		
			3		0.0050		
			4		0.0100		
			5		0.0300		
			6		0.0600		
			Description	Sulfur in Mineral Oil Set of 11 Calibration Standards		7	
8		0.5000					
9		1.0000					
10		2.5000					
11		5.0000					
Product Code		SMO-50		Product Code		SMO-1000	
Description	Sulfur in Mineral Oil Check Standard		Description	Sulfur in Mineral Oil Check Standard			
Sulfur wt%	0.0050		Sulfur wt%	0.1000			
Product Code		SMO-1.00		Product Code		SMO-3.00	
Description	Sulfur in Mineral Oil Check Standard		Description	Sulfur in Mineral Oil Check Standard			
Sulfur wt%	1.00		Sulfur wt%	3.00			

Pricing subject to change without prior notice

Sulfur Calibration Sets

Product CodeSDF10		Standard Number		Sulfur Wt%	
Product	Sulfur in Diesel Fuel	1		0.0000	
Test Method	D2622 D4294	2		0.1000	
		3		0.2500	
		4		0.5000	
		5		1.0000	
		6		1.5000	
Description	Sulfur in Diesel Fuel Set of 10 Calibration Standards	7		2.0000	
		8		3.0000	
		9		4.0000	
		10		5.0000	
Product CodeSDF-1.00		Product CodeSDF-3.00			
Description	Sulfur in Diesel Fuel Check Standard	Description	Sulfur in Diesel Fuel Check Standard		
Sulfur wt%	1.00	Sulfur wt%	3.00		

Customization of Catalog Sets Available

Sulfur Calibration Sets

Product Code		SCO10	Standard Number		Sulfur Wt%
Product	Sulfur in Crude Oil		1		Blank~0.0400-0.0500
Test Method	D2622 D4294		2		0.1000
			3		0.2500
			4		0.5000
			5		1.0000
			6		1.5000
Description	Sulfur in Crude Oil Set of 10 Calibration Standards		7		2.0000
			8		3.0000
			9		4.0000
			10		5.0000
Product Code		SCO-1.00	Product Code		SCO-3.00
Description	Sulfur in Crude Oil Check Standard		Description	Sulfur in Crude Oil Check Standard	
Sulfur wt%	1.00		Sulfur wt%	3.00	

Pricing subject to change without prior notice

Sulfur Calibration Sets

Product Code		SR010	Standard Number		Sulfur Wt%
Product	Sulfur in Residual Oil		1		Blank~0.2000-0.2500
Test Method	D2622 D4294		2		0.5000
			3		1.0000
			4		1.5000
			5		2.0000
			6		2.5000
Description	Sulfur in Residual Oil Set of 10 Calibration Standards		7		3.0000
			8		3.5000
			9		4.0000
			10		5.0000
Product Code		SR0-1.00	Product Code		SR0-3.00
Description	Sulfur in Residual Oil Check Standard		Description	Sulfur in Residual Oil Check Standard	
Sulfur wt%	1.00		Sulfur wt%	3.00	

Customization of Catalog Sets Available

Sulfur Calibration Sets

Product Code		SM06H	Standard Number		Sulfur Wt%
Product	Sulfur in Mineral Oil		1		0.0000
Test Method	D2622 D4294		2		0.1000
			3		0.5000
			4		1.0000
			5		2.5000
			6		5.0000
Description	Sulfur in Mineral Oil High level Set of 6 Calibration Standards				
Product Code		SMO-5000	Product Code		SMO-2.50
Description	Sulfur in Mineral Oil Check Standard		Description	Sulfur in Mineral Oil Check Standard	
Sulfur wt%	0.5000		Sulfur wt%	2.50	

Product Code		SM07L	Standard Number		Sulfur Wt%
Product	Sulfur in Mineral Oil		1		0.0000
Test Method	D2622 D4294		2		0.0020
			3		0.0050
			4		0.0100
			5		0.0300
			6		0.0600
Description	Sulfur in Mineral Oil Low level Set of 7 Calibration Standards		7		0.1000
Product Code		SMO-25	Product Code		SMO-500
Description	Sulfur in Mineral Oil Check Standard		Description	Sulfur in Mineral Oil Check Standard	
Sulfur wt%	0.0025		Sulfur wt%	0.0500	

Pricing subject to change without prior notice

Sulfur Calibration Sets

Product Code		SIN6C	Standard Number		Sulfur mg/kg
Product	Sulfur in Mineral Oil		1		0
Test Method	D7039, ISO 20884		2		10
			3		50
			4		100
			5		200
			6		500
Description	Sulfur in Mineral Oil Set of 6 Calibration Standards				
Product Code		SMO-25	Product Code		SMO-250
Description	Sulfur in Mineral Oil Check Standard		Description	Sulfur in Mineral Oil Check Standard	
Sulfur wt%	0.0025		Sulfur wt%	0.0250	

Product Code		SM08(OX)	Standard Number		Sulfur mg/kg
Product	Sulfur in Mineral Oil		1		0
			2		5
Test Method	D7039, ISO 20884		3		10
			4		30
			5		50
			6		70
			7		100
Description	Sulfur in Mineral Oil Set of 8 Calibration Standards		8		150
Product Code		SMO-10	Product Code		SMO-75
Description	Sulfur in Mineral Oil Check Standard		Description	Sulfur in Mineral Oil Check Standard	
Sulfur wt%	0.0010		Sulfur wt%	0.0075	

Customization of Catalog Sets Available

Sulfur Calibration Sets

Product Code SDF7		Standard Number Sulfur Wt%	
Product	Sulfur in Diesel Fuel	1	0.0000
Test Method	D2622 D4294 D7039	2	0.0200
		3	0.0400
		4	0.0500
		5	0.0600
		6	0.0800
Description	Sulfur in Diesel Fuel Set of 7 Calibration Standards	7	0.1000
Product Code SDF-250		Product Code SDF-750	
Description	Sulfur in Diesel Fuel Check Standard	Description	Sulfur in Diesel Fuel Check Standard
Sulfur wt%	0.0250	Sulfur wt%	0.0750

Product Code SC07		Standard Number Sulfur Wt%	
Product	Sulfur in Crude Oil	1	Blank~0.0400-0.0500
Test Method	D2622 D4294	2	0.1000
		3	0.2500
		4	0.5000
		5	1.0000
		6	1.5000
Description	Sulfur in Crude Oil Set of 7 Calibration Standards	7	2.0000
Product Code SCO-1000		Product Code SCO-1.00	
Description	Sulfur in Crude Oil Check Standard	Description	Sulfur in Crude Oil Check Standard
Sulfur wt%	0.1000	Sulfur wt%	1.00

Pricing subject to change without prior notice

Sulfur Calibration Sets for XRF

Product Code		SI011	Standard Number	Sulfur ng/μl
Product	Sulfur in Isooctane		1	0.00
Test Method	D5453, D2622		2	0.50
			3	1.00
			4	2.50
			5	5.00
			6	10.00
Description	Sulfur in Isooctane Set of 11 Calibration Standards		7	25.00
			8	50.00
			9	100.0
			10	500.0
			11	1,000.0

Product Code		SI06(L)	Standard Number	Sulfur ng/μl
Product	Sulfur in Isooctane Low range		1	0.00
			2	0.50
			3	1.00
			4	2.50
			5	5.0
			6	10.0

Product Code		SI04(M)	Standard Number	Sulfur ng/μl
Product	Sulfur in Isooctane Mid range		1	5.0
			2	25.0
			3	50.0
			4	100.0

Product Code		SI03(H)	Standard Number	Sulfur ng/μl
Product	Sulfur in Isooctane high range		1	100.0
			2	500.0
			3	1,000.0

Customization of Catalog Sets Available

Sulfur Calibration Sets for XRF

Product Code		S(BS)I13	Standard Number		Sulfur Wt%
Product	Sulfur in Isooctane for Gasoline and Reformulated Gasoline analysis		1		0.0000
Test Method	D2622		2		0.0010
	D4294		3		0.0020
	D6334		4		0.0030
	D7039		5		0.0050
Description	Sulfur in Isooctane Set of 13 Calibration Standards		6		0.0100
			7		0.0200
			8		0.0300
			9		0.0400
			10		0.0600
			11		0.1000
			12		0.2000
			13		0.3000
Product Code		SIO-25	Product Code		SIO-1000
Description	Sulfur in Isooctane Check Standard		Description	Sulfur in Isooctane Check Standard	
Sulfur wt%	0.0025		Sulfur wt%	0.1000	

Pricing subject to change without prior notice

Sulfur Calibration Sets for XRF

Product Code S(BS)IT10		Standard Number	Sulfur Wt%
Product	Sulfur in Isooctane for Gasoline and Reformulated Gasoline analysis	1	0.0000
		2	0.0005
Test Method	D4294 D6334 D7039 D7212	3	0.0010
		4	0.0030
		5	0.0050
		6	0.0075
Description	Sulfur in Isooctane/Toluene Set of 10 Calibration Standards	7	0.0100
		8	0.0300
		9	0.0500
		10	0.1000

Product Code SIO-10		Product Code SIO-250	
Description	Sulfur in Isooctane Check Standard	Description	Sulfur in Isooctane Check Standard
Sulfur wt%	0.0010	Sulfur wt%	0.0250

Product Code SG10C	
Product	Sulfur in Gasoline
Test Method	D2622 D4292 D6334
Description	Sulfur in Gasoline, Set of 10 Calibration Standards, concentrations specified by customer

Product Code SG7C	
Product	Sulfur in Gasoline
Test Method	D2622 D4292 D6334
Description	Sulfur in Gasoline, Set of 7 Calibration Standards, concentrations specified by customer

Customization of Catalog Sets Available

EPA Standards

Product Code		ULSD0-25	Standard Number	Sulfur mg/kg
Product	Sulfur in Ultra Low Diesel Fuel		1	0
			2	5
Test Method	EPA 80.580 to 80.585		3	10
			4	15
			5	20
			6	25
Description	Sulfur in Ultra Low Diesel Fuel Set of 6 Calibration Standards			

Product Code		SDF-10	Product Code	SDF-15
Description	Sulfur in Diesel Fuel Check Standard		Description	Sulfur in Diesel Fuel Check Standard
Sulfur wt%		0.0010	Sulfur wt%	0.0015

Product Code		ULSD20-100	Standard Number	Sulfur mg/kg
Product	Sulfur in Ultra Low Diesel Fuel		1	20
			2	40
Test Method	EPA 80.580 to 80.585		3	60
			4	80
			5	100
Description	Sulfur in Ultra Low Diesel Fuel Set of 5 Calibration Standards			

Product Code		SDF-25	Product Code	SDF-50
Description	Sulfur in Diesel Fuel Check Standard		Description	Sulfur in Diesel Fuel Check Standard
Sulfur wt%		0.0025	Sulfur wt%	0.0050

Pricing subject to change without prior notice

EPA Standards

Product Code		SEPA(G)H	Product Code		SEPA(G)L
Product	Sulfur in Mineral Oil		Product	Sulfur in Mineral Oil	
Test Method	EPA 80.580 to 80.585		Test Method	EPA 80.580 to 80.585	
Description	Sulfur in Mineral Oil Check Standards for EPA High Level Requirements, Set of 2 Standards 200 ml each		Description	Sulfur in Mineral Oil Check Standards for EPA Low Level Requirements, Set of 2 Standards 200 ml each	
	Standard Number	Sulfur mg/kg		Standard Number	Sulfur mg/kg
	1	150		1	5
	2	450		2	15

Product Code		SEPA(P)H	Product Code		SEPA(P)L
Product	Sulfur in Diesel Fuel		Product	Sulfur in Diesel Fuel	
Test Method	EPA 80.580 to 80.585		Test Method	EPA 80.580 to 80.585	
Description	Sulfur in Diesel Fuel, Check Standard for EPA High Level Requirements. 500 ml each		Description	Sulfur in Diesel Fuel Check Standard for EPA Low Level Requirements. 500 ml each	
	Standard Number	Sulfur mg/kg		Standard Number	Sulfur mg/kg
	1	300		1	7

Product Code		SEPA6C
Product	Complete Set	
Test Method	EPA 80.580 to 80.585	
Description	Complete Set of Standards including SEPA(G)H, SEPA(G)L, SEPA(P)H, SEPA(P)L	

Customization of Catalog Sets Available

EPA Standards

Product Code		SEPA-T2-P
Description	Sulfur in Gasoline Check Standard. For EPA Tier 2 Precision Testing. Concentration = 28 mg/kg	

Product Code		SEPA-T2-L
Description	Sulfur in Gasoline Check Standard. For EPA Tier 2 Accuracy (Low) Testing. Concentration = 25 mg/kg	

Product Code		SEPA-T2-H
Description	Sulfur in Gasoline Check Standard For EPA Tier 2 Accuracy (High) Testing Concentration = 35 mg/kg	

Product Code		SEPA-T2-SET
Description	Sulfur in Gasoline Complete Test Set. For EPA Tier 2 Test Method Qualification, 3 standards per set, (Includes SEPA-T2-L-500, SEPA-T2-H-500 & SEPA-T2-P-1000).	

Product Code		SEPA-T3-P
Description	Sulfur in Gasoline Check Standard. For EPA Tier 3 Precision Testing. Concentration = 6 mg/kg	

Product Code		SEPA-T3-L
Description	Sulfur in Gasoline Check Standard. For EPA Tier 3 Accuracy (Low) Testing. Concentration = 5 mg/kg	

Product Code		SEPA-T3-H
Description	Sulfur in Gasoline Check Standard. For EPA Tier 3 Accuracy (High) Testing Concentration = 15 mg/kg	

Product Code		SEPA-T3-SET
Description	Sulfur in Gasoline Complete Test Set. For EPA Tier 3 Test Method Qualification, 3 standards per set, (Includes SEPA-T3-L-500, SEPA-T3-H-500 & SEPA-T3-P-1000).	

Pricing subject to change without prior notice

EPA Standards

Product Code		MARPOL-P
Description	Sulfur in Diesel Fuel Check Standard. For MARPOL / EPA Marine Fuel Precision Testing. Concentration = 900 mg/kg	

Product Code		MARPOL-L
Description	Sulfur in Diesel Fuel Check Standard. For MARPOL / EPA Marine Fuel Accuracy (Low) Testing. Concentration = 350 mg/kg	

Product Code		MARPOL-H
Description	Sulfur in Diesel Fuel Check Standard. For MARPOL / EPA Marine Fuel Accuracy (High) Testing. Concentration = 950 mg/kg	

Product Code		MARPOL-SET
Description	Sulfur in Diesel Fuel Complete Test Set. For MARPOL / EPA Marine Fuel Test Method Qualification Testing. 3 standards per set; quantity varies, (Includes MARPOL-L-500, MARPOL-H-500 & MARPOL-P-1000).	

Polysulfide Calibrations

Product Code		S(PS)M06(H)	Standard Number	Sulfur wt%
Product	Polysulfide in Mineral Oil		1	0
Test Method	D2622, D4294, D5453, D7039, D7212, D7220		2	1.0
			3	2.0
			4	3.0
			5	4.0
			6	5.0
Description	Sulfur as Polysulfide in Mineral Oil High level 6 Standards per set			

Customization of Catalog Sets Available

Polysulfide Calibrations

Product Code S(PS)M06(L)		Standard Number	Sulfur mg/kg
Product	Polysulfide in Mineral Oil	1	0
Test Method	D2622, D4294, D5453, D7039, D7220	2	100
		3	250
		4	500
		5	750
		6	1000
Description	Sulfur as Polysulfide in Mineral Oil Low level 6 Standards per set		

Product Code S(PS)M013		Standard Number	Sulfur mg/kg
Product	Polysulfide in Mineral Oil	1	0
Test Method	D2622, D4294, D5453, D7039, D7220	2	1.0
		3	2.5
		4	5.0
		5	10
		6	25
		7	50
		8	75
Description	Sulfur as Polysulfide in Mineral Oil Set of 13 Standards per set	9	100
		10	250
		11	500
		12	750
		13	1000

Pricing subject to change without prior notice

Sulfur Calibration sets for EN 14596

Product Code		SISOH7	Standard Number	Sulfur Wt%
Product	Sulfur Standards High range with 18% Zirconium Internal Standard		1	0.0000
Test Method	ISO 14596		2	0.4000
			3	0.7000
Description	Sulfur in Mineral Oil High Level with 18% Zirconium Internal Standard Set of 7 Calibration Standards		4	1.0000
			5	1.5000
			6	2.0000
			7	2.5000

Product Code		SISOL8	Standard Number	Sulfur Wt%
Product	Sulfur Standards Low range with 1% Zirconium Internal Standard		1	0.0000
Test Method	ISO 14596		2	0.0010
			3	0.0050
Description	Sulfur in Mineral Oil Low Level with 1% Zirconium Internal Standard Set of 8 Calibration Standards		4	0.0100
			5	0.0250
			6	0.0500
			7	0.0750
			8	0.1000

Customization of Catalog Sets Available

Sulfur in Mineral Oil Check Standards

Product Code SMO-10		Product Code SMO-25	
Description	Sulfur in Mineral Oil Check Standard	Description	Sulfur in Mineral Oil Check Standard
Sulfur wt%	0.0010	Sulfur wt%	0.0025

Product Code SMO-50		Product Code SMO-75	
Description	Sulfur in Mineral Oil Check Standard	Description	Sulfur in Mineral Oil Check Standard
Sulfur wt%	0.0050	Sulfur wt%	0.0075

Product Code SMO-250		Product Code SMO-500	
Description	Sulfur in Mineral Oil Check Standard	Description	Sulfur in Mineral Oil Check Standard
Sulfur wt%	0.0250	Sulfur wt%	0.0500

Product Code SMO-1000		Product Code SMO-5000	
Description	Sulfur in Mineral Oil Check Standard	Description	Sulfur in Mineral Oil Check Standard
Sulfur wt%	0.1000	Sulfur wt%	0.5000

Product Code SMO-1.00		Product Code SMO-2.50	
Description	Sulfur in Mineral Oil Check Standard	Description	Sulfur in Mineral Oil Check Standard
Sulfur wt%	1.00	Sulfur wt%	2.50

Product Code SMO-3.00	
Description	Sulfur in Mineral Oil Check Standard
Sulfur wt%	3.00

Sulfur in Diesel Fuel Check Standards

Product Code	SDF-10	Product Code	SDF-15
Description	Sulfur in Diesel Fuel Check Standard	Description	Sulfur in Diesel Fuel Check Standard
Sulfur wt%	0.0010	Sulfur wt%	0.0015

Product Code	SDF-25	Product Code	SDF-50
Description	Sulfur in Diesel Fuel Check Standard	Description	Sulfur in Diesel Fuel Check Standard
Sulfur wt%	0.0025	Sulfur wt%	0.0050

Product Code	SDF-250	Product Code	SDF-750
Description	Sulfur in Diesel Fuel Check Standard	Description	Sulfur in Diesel Fuel Check Standard
Sulfur wt%	0.0250	Sulfur wt%	0.0750

Product Code	SDF-1.00	Product Code	SDF-3.00
Description	Sulfur in Diesel Fuel Check Standard	Description	Sulfur in Diesel Fuel Check Standard
Sulfur wt%	1.00	Sulfur wt%	3.00



© ASI Standards

Customization of Catalog Sets Available

Sulfur Calibration Check Standards

Product Code SCO-1000		Product Code SCO-1.00	
Description	Sulfur in Crude Oil Check Standard	Description	Sulfur in Crude Oil Check Standard
Sulfur wt%	0.1000	Sulfur wt%	1.00

Product Code SCO-3.00	
Description	Sulfur in Crude Oil Check Standard
Sulfur wt%	3.00

Sulfur in Residual Oil Check Standards

Product Code SRO-1.00		Product Code SRO-3.00	
Description	Sulfur in Residual Oil Check Standard	Description	Sulfur in Residual Oil Check Standard
Sulfur wt%	1.00	Sulfur wt%	3.00

Sulfur in Isooctane Check Standards

Product Code SIO-10		Product Code SIO-25	
Description	Sulfur in Isooctane Check Standard	Description	Sulfur in Isooctane Check Standard
Sulfur wt%	0.0010	Sulfur wt%	0.0025

Product Code SIO-250		Product Code SIO-1000	
Description	Sulfur in Isooctane Check Standard	Description	Sulfur in Isooctane Check Standard
Sulfur wt%	0.0250	Sulfur wt%	0.1000



Pricing subject to change without prior notice

Nitrogen and Sulfur Ampoules

For use in analysis by Chemiluminescence, UV Fluorescence and Oxidative Microcoulometry

Suitable for ASTM Methods D3120, D3246, D4629, D5453, and D5762

Nitrogen and Sulfur in Petroleum Products

Product Code A-NS(L)	
Product	Nitrogen and Sulfur in petroleum products. Sulfur by ultraviolet fluorescence and Nitrogen by chemiluminescence.
Test Method	S-D5453 N-D4629, D5762
Description	Dibenzothiophene (S) and Pyridine(N) in Isooctane packaged in 2 ml amber pre-scored ampoules. Concentrations are Blk, 0.25, 0.5, 1.0, 2.5, 5.0 ng/ul

Product Code A-NS(M)	
Product	Nitrogen and Sulfur in petroleum products. Sulfur by ultraviolet fluorescence and Nitrogen by chemiluminescence.
Test Method	S-D5453 N-D4629, D5762
Description	Dibenzothiophene (S) and Pyridine(N) in Isooctane packaged in 2 ml amber pre-scored ampoules. Concentrations are Blk, 5, 25, 50, 100 ng/ul

Product Code A-NS(H)	
Product	Nitrogen and Sulfur in petroleum products. Sulfur by ultraviolet fluorescence and Nitrogen by chemiluminescence.
Test Method	S-D5453 N-D4629, D5762
Description	Dibenzothiophene (S) and Pyridine(N) in Isooctane packaged in 2 ml amber pre-scored ampoules. Concentrations are Blk, 100, 500, 1000 ng/ul

Nitrogen in Petroleum Products

Product Code A4629(1)	
Product	Nitrogen in petroleum products by syringe-inlet chemiluminescence.
Test Method	D4629
Description	Pyridine in Isooctane packaged in 2 ml amber pre-scored ampoules. Concentrations are Blk, 0.25, 0.5, 1.0, 2.5, 5.0 mg/kg

Product Code A4629(2)	
Product	Nitrogen in petroleum products by syringe-inlet chemiluminescence.
Test Method	D4629
Description	Pyridine in Isooctane packaged in 2 ml amber pre-scored ampoules. Concentrations are Blk, 5, 25, 50, 100 mg/kg

Customization of Catalog Sets Available

Nitrogen and Sulfur Ampoules

Nitrogen in Petroleum Products

Product Code A5762	
Product	Nitrogen in petroleum products by boat-inlet chemiluminescence.
Test Method	D5762
Description	Acridine in Xylenes packages in 2 ml amber pre-scored ampoules. Concentrations are Blk, 100, 500, 1000 mg/kg

Sulfur Ampoules in Petroleum Products

Product Code A5453(L)	
Product	Sulfur in liquid petroleum hydrocarbons by ultraviolet fluorescence.
Test Method	D5453
Description	Di-n-butyl sulfide in Toluene or Isooctane matrix packaged in 2 ml amber pre-scored ampoules. Concentrations are Blk, 1, 2.5, 5, 7.5, 10 ng/μl. Please specify matrix

Product Code A5453(M)	
Product	Sulfur in liquid petroleum hydrocarbons by ultraviolet fluorescence.
Test Method	D5453
Description	Di-n-butyl sulfide in Toluene or Isooctane matrix packaged in 2 ml amber pre-scored ampoules. Concentrations are Blk, 5, 25, 50, 100, 200 ng/μl. Please specify matrix

Product Code A5453(H)	
Product	Sulfur in liquid petroleum hydrocarbons by ultraviolet fluorescence.
Test Method	D5453
Description	Di-n-butyl sulfide in Toluene or Isooctane matrix packaged in 2 ml amber pre-scored ampoules. Concentrations are Blk, 100, 250, 500, 750, 1000 ng/μl Please specify matrix

Product Code A5453(T)	
Product	Sulfur in liquid petroleum hydrocarbons by ultraviolet fluorescence.
Test Method	D5453
Description	Di-n-butyl sulfide in Toluene or Isooctane matrix packaged in 2 ml amber pre-scored ampoules. Concentrations are from the L, M and H ranges. Please specify matrix

Product Code A5453CK	
Product	Sulfur in liquid petroleum hydrocarbons by ultraviolet fluorescence.
Test Method	D5453
Description	Di-n-butyl sulfide in Toluene or Isooctane matrix packaged in 2 ml amber pre-scored ampoules. Daily calibration check sample. Specify concentration and matrix - 10 ampoules in set.

Pricing subject to change without prior notice

Chlorine and Sulfur Calibration in Various Matrices

Product Code						CLSM010	
Product		Chlorine and Sulfur in Mineral Oil					
Description		Chlorinated Hydrocarbon and Di-n-butyl sulfide in Mineral Oil Set of 10 Calibration Standards					
Standard Number		Chlorine Wt%	Sulfur Wt%	Standard Number		Chlorine Wt%	Sulfur Wt%
1		0.0000	0.0000	6		0.6000	0.3000
2		0.8000	0.1000	7		0.1000	0.4000
3		0.5000	0.6000	8		0.4000	0.5000
4		0.3000	0.2000	9		1.0000	0.8000
5		0.2000	0.7000	10		0.0000	1.0000

Product Code						CLSW010	
Product		Chlorine and Sulfur in Waste Oil					
Description		Chlorinated Hydrocarbon and Di-n-butyl sulfide in Waste Oil Set of 10 Calibration Standards					
Standard Number		Chlorine Wt%	Sulfur Wt%	Standard Number		Chlorine Wt%	Sulfur Wt%
1		1.0000	0.5000	6		0.8000	1.7500
2		0.0200	2.5000	7		0.0500	1.2500
3		0.6500	0.5000	8		1.0000	2.0000
4		0.2000	1.0000	9		0.3800	2.2500
5		0.5000	1.5000	10		0.1000	0.7500

Chlorine Calibration Set in Waste Oil

Product Code		CLW07	Standard Number	Chlorine Wt%
Product	Chlorine in Waste Oil		1	0.0500
Description	Chlorinated Hydrocarbon in Waste Oil Set of 7 Calibration Standards		2	0.2000
			3	0.4000
			4	0.5000
			5	0.6000
			6	0.8000
			7	1.0000

Customization of Catalog Sets Available

Metal Working Fluids Standards

Product Code				MWFL13
Product	Metal Working Fluids Cl, P, S			
Description	For the analysis of Lubricant Base Metal Working Fluids Set of 13 Calibration Standards			
Standard Number	Cl Wt%	P Wt%	S Wt%	
1	0.0000	0.0000	0.0000	
2	0.7500	0.0250	0.5000	
3	0.0500	0.1000	3.0000	
4	1.0000	0.5000	2.5000	
5	0.1000	0.0050	2.0000	
6	1.5000	0.2000	1.0000	
7	2.0000	0.0050	3.0000	
8	1.0000	0.0500	0.1000	
9	0.5000	0.4000	0.0000	
10	2.0000	0.2000	1.5000	
11	0.0000	0.5000	1.5000	
12	1.2500	0.0100	0.0500	
13	0.0500	0.3000	0.0500	

Pricing subject to change without prior notice

Sulfur and Metals in Oil

Formulated for the analysis of fuel oils and residual oils.

Concentrations of Fe, Ni and V are independent of Sulfur concentration. Each certified component added independently.

All sets contain 100 ml bottles, unless otherwise specified

Product Code SFNVM012				
Product	Sulfur and Metals in Mineral Oil			
Description	Sulfur and Metals in Mineral Oil S, Fe, Ni, V Set of 12 Calibration Standards			
Standard Number	Sulfur Wt%	Iron (mg/kg)	Nickel (mg/kg)	Vanadium (mg/kg)
1	0.00	0	0	0
2	0.50	300	10	500
3	1.00	500	100	25
4	0.00	100	80	250
5	2.00	200	40	100
6	2.50	400	5	400
7	3.00	0	60	300
8	3.50	500	0	200
9	0.00	100	100	0
10	4.50	300	50	250
11	5.00	200	20	500
12	5.50	50	100	50

Product Code SNVM012			
Product	Sulfur and Metals in Mineral Oil		
Description	Sulfur and Metals in Mineral Oil S, Ni, V Set of 12 Calibration Standards		
Standard Number	Sulfur Wt%	Nickel (mg/kg)	Vanadium (mg/kg)
1	0.00	0	0
2	0.50	10	500
3	1.00	100	25
4	1.50	80	250
5	2.00	40	100
6	2.50	5	400
7	3.00	60	300
8	3.50	0	200
9	4.00	100	0
10	4.50	50	250
11	5.00	20	500
12	5.50	100	50

Customization of Catalog Sets Available

Sulfur and Metals in Oil

Product Code SFNVR012				
Product	Sulfur and Metals in Residual Oil			
Description	Sulfur and Metals in Residual Oil S, Fe, Ni, V Set of 12 Calibration Standards			
Standard Number	Sulfur Wt%	Iron (mg/kg)	Nickel (mg/kg)	Vanadium (mg/kg)
1	Blank	Blank	Blank	Blank
2	0.50	300	10	500
3	1.00	500	100	25
4	Blank	100	80	250
5	2.00	200	40	100
6	2.50	400	5	400
7	3.00	Blank	60	300
8	3.50	500	Blank	200
9	Blank	100	100	Blank
10	4.50	300	50	250
11	5.00	200	20	500
12	5.50	50	100	50

Product Code SNVR012			
Product	Sulfur and Metals in Residual Oil		
Description	Sulfur and Metals in Residual Oil S, Ni, V Set of 12 Calibration Standards		
Standard Number	Sulfur Wt%	Nickel (mg/kg)	Vanadium (mg/kg)
1	Blank	Blank	Blank
2	0.50	10	500
3	1.00	100	25
4	Blank	80	250
5	2.00	40	100
6	2.50	5	400
7	3.00	60	300
8	3.50	Blank	200
9	Blank	100	Blank
10	4.50	50	250
11	5.00	20	500
12	5.50	100	50

Pricing subject to change without prior notice

Lead Standards in Gasoline and Isooctane

Suitable for ASTM D5059

Product Code		BIIS
Product	Bismuth Internal Standard	
Test Method	D5059	
Description	Internal Standard Conc: 0.793g Bi/L	

Product Code		PBG7A	Standard Number	Lead g/gal
Product	Lead in Gasoline		1	0.000
Test Method	Covers the scope of ASTM D5059 Part A		2	0.100
			3	1.000
			4	2.000
			5	3.000
			6	4.000
Description	Lead in Gasoline Set of 7 Calibration Standards		7	5.000

Product Code		PBG7C	Standard Number	Lead g/gal
Product	Lead in Gasoline		1	0.000
Test Method	Covers the scope of ASTM D5059 Part C		2	0.001
			3	0.005
			4	0.010
			5	0.050
			6	0.100
Description	Lead in Gasoline Set of 7 Calibration Standards		7	0.300

Product Code		PBG12
Product	Lead in Gasoline	
Test Method	Covers the scope of ASTM D5059 Part A & C	
Description	This set is made up of PBG7A and PBG7C Set of 12 Calibration Standards	

Customization of Catalog Sets Available

Lead Standards in Gasoline and Isooctane

Suitable for ASTM D5059

Product Code		PBI07A	Standard Number	Lead g/ gal
Product	Lead in Isooctane		1	0.000
Test Method	D5059 Part A		2	0.100
			3	1.000
			4	2.000
			5	3.000
			6	4.000
Description	Lead in Isooctane Set of 7 Calibration Standards		7	5.000

Product Code		PBI07C	Standard Number	Lead g/ gal
Product	Lead in Isooctane		1	0.000
Test Method	D5059 Part C		2	0.001
			3	0.005
			4	0.010
			5	0.050
			6	0.100
Description	Lead in Isooctane Set of 7 Calibration Standards		7	0.300

Product Code		PBI012
Product	Lead in Isooctane	
Test Method	D5059 Part A & C	
Description	This set is made up of PBI07A and PBI07C Set of 12 Calibration Standards	

Pricing subject to change without prior notice

Vanadium and Nickel Standards

With Manganese Internal Standards in Xylene - Mineral Oil

Suitable for ISO/CD 14597

All sets contain 100 ml bottles, unless otherwise specified.

Product Code		MNIS-0.05
Product	Manganese Internal Standard	
Test Method	ISO 14597	
Description	Internal Standard Concentration 0.05%	

Product Code		NiISO7	Standard Number	Ni Wt%
Product	Nickel Standards with 0.05% Manganese Internal Standard		1	0.0000
Test Method	ISO 14597		2	0.0005
			3	0.0010
			4	0.0025
			5	0.0050
			6	0.0075
Description	Nickel Reagent and 0.05% Manganese Internal Standard in Xylene-Mineral Oil Set of 7 Calibration Standards		7	0.0100

Product Code		VISOH7	Standard Number	V Wt%
Product	Vanadium Standard, High Range with 0.05% Manganese Internal Standard		1	0.0000
Test Method	ISO 14597		2	0.0300
			3	0.0400
			4	0.0500
			5	0.0600
			6	0.0800
Description	Vanadium Reagent and 0.05% Manganese Internal Standard in Xylene-Mineral Oil Set of 7 Calibration Standards		7	0.1000

Customization of Catalog Sets Available

Vanadium and Nickel Standards

Product Code		VISOL9	Standard Number	V Wt%
Product	Vanadium Standard, Low Range with 0.05% Manganese Internal Standard	ISO 14957	1	0.0005
			2	0.0025
Test Method	ISO 14957		3	0.0050
			4	0.0075
Description	Vanadium Reagent and 0.05% Manganese Internal Standard in Xylene-Mineral Oil Set of 9 Calibration Standards		5	0.0100
			6	0.0125
			7	0.0150
			8	0.0175
			9	0.0200



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Lubricating Oil Standards



All sets in 100 ml bottles

Calibration standards for the analysis of lubricating oils

Concentrations of all elements are independent of Sulfur concentration. Each certified component added independently.

ASTM D4927, D6443, D6481, D7751

Product Code							LOE10
Product	Elements in Lubricating Oil						
Test Method	D4927 D6443 D6481						
Description	Abbreviated set for ASTM method Set of 10 Calibration Standards						
Elements	Ca, Cl, Cu, Mg, P, S, Zn						
Standard Number	Ca Wt%	Cl Wt%	Cu Wt%	Mg Wt%	P Wt%	S Wt%	Zn Wt%
1	0.0200	0.0300	0.0100	0.2000	0.2500	1.0000	0.0200
2	0.0200	0.0200	0.0500	0.2000	0.0200	0.0200	0.2500
3	0.0200	0.2000	0.0100	0.0400	0.2500	0.1500	0.2500
4	0.0200	0.2000	0.0500	0.0400	0.0200	1.0000	0.0200
5	0.4000	0.0200	0.0100	0.0400	0.0200	1.0000	0.2500
6	0.4000	0.0200	0.0500	0.0400	0.2500	0.0200	0.0200
7	0.4000	0.2000	0.0100	0.2000	0.0200	0.0200	0.0500
8	0.4000	0.2000	0.0500	0.2000	0.2500	1.0000	0.2500
9	0.2000	0.1000	0.0250	0.0800	0.1500	0.5000	0.1000
10	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Customization of Catalog Sets Available

Lubricating Oil Standards

Product Code					LOE17
Product	Elements in Lubricating Oil				
Test Method	D4927 D6443 D6481 D7751				
Description	Engine Oil Set of 17 Calibration Standards				
Elements	Ca, P, S, Zn				
Standard Number	Ca Wt%	P Wt%	S Wt%	Zn Wt%	
1	0.6000	0.0050	0.1750	0.0600	
2	0.5000	0.2000	0.0500	0.0800	
3	0.4000	0.1500	0.3000	0.1800	
4	0.2600	0.2500	0.1500	0.1200	
5	0.0050	0.0050	0.4500	0.0700	
6	0.4000	0.0250	0.3500	0.1000	
7	0.3000	0.0600	0.2500	0.1200	
8	0.2000	0.1000	0.4500	0.1000	
9	0.0600	0.0800	0.3000	0.1300	
10	0.0600	0.0500	0.2000	0.0500	
11	0.0500	0.1200	0.1000	0.0750	
12	0.0250	0.1500	0.2000	0.1300	
13	0.0050	0.2000	0.4000	0.1500	
14	0.1700	0.2500	0.5500	0.1100	
15	0.1000	0.1000	0.2000	0.2000	
16	0.0100	0.0100	0.6000	0.2500	
17	0.0000	0.0000	0.0000	0.0000	

Pricing subject to change without prior notice

Lubricating Oil Standards

Product Code					LOA11
Product	Elements in Lubricating Oil				
Test Method	D4927 D6443 D6481				
Description	Similar to LOE17, but additive package concentration ranges Set of 11 Calibration Standards				
Elements	Ca, P, S, Zn				
Standard Number	Ca Wt%	P Wt%	S Wt%	Zn Wt%	
1	0.500	1.000	0.500	0.500	
2	2.000	1.000	2.500	2.000	
3	2.000	1.250	1.000	1.500	
4	5.000	0.000	0.000	0.000	
5	4.000	0.500	1.250	0.500	
6	2.500	0.750	4.000	1.000	
7	3.500	0.000	1.500	1.000	
8	0.500	2.000	5.000	1.000	
9	1.000	0.750	2.000	1.500	
10	2.500	1.200	3.000	0.500	
11	0.000	0.000	0.000	0.000	

Customization of Catalog Sets Available

Lubricating Oil Standards

Product Code						LOE17A
Product	Elements in Lubricating Oil					
Test Method	D4927 D6443 D6481					
Description	Same as LOE17, but also contains Cl Set of 17 Calibration Standards					
Elements	Ca, Cl, P, S, Zn					
Standard Number	Ca Wt%	Cl Wt%	P Wt%	S Wt%	Zn Wt%	
1	0.6000	0.1000	0.0050	0.1750	0.0600	
2	0.5000	0.0000	0.2000	0.0500	0.0800	
3	0.4000	0.0100	0.1500	0.3000	0.1800	
4	0.2600	0.5000	0.2500	0.1500	0.1200	
5	0.0050	1.0000	0.0050	0.4500	0.0700	
6	0.4000	0.4000	0.0250	0.3500	0.1000	
7	0.3000	0.1000	0.0600	0.2500	0.1200	
8	0.2000	0.0100	0.1000	0.4500	0.1000	
9	0.0600	0.0500	0.0800	0.3000	0.1300	
10	0.0600	0.2000	0.0500	0.2000	0.0500	
11	0.0500	0.5000	0.1200	0.1000	0.0750	
12	0.0250	0.8000	0.1500	0.2000	0.1300	
13	0.0050	1.0000	0.2000	0.4000	0.1500	
14	0.1700	0.6000	0.2500	0.5500	0.1100	
15	0.1000	0.2000	0.1000	0.2000	0.2000	
16	0.0100	0.4000	0.0100	0.6000	0.2500	
17	0.0000	0.0000	0.0000	0.0000	0.0000	

Pricing subject to change without prior notice

Lubricating Oil Standards

Product Code							LOE17AB
Product	Elements in Lubricating Oil						
Test Method	D4927 D6443 D6481						
Description	Same as LOE17, but also contains Ba and Cl Set of 17 Calibration Standards						
Elements	Ba, Ca, Cl, P, S, Zn						
Standard Number	Ba Wt%	Ca Wt%	Cl Wt%	P Wt%	S Wt%	Zn Wt%	
1	0.1000	0.6000	0.1000	0.0050	0.1750	0.0600	
2	0.1750	0.5000	0.0000	0.2000	0.0500	0.0800	
3	0.0000	0.4000	0.0100	0.1500	0.3000	0.1800	
4	0.0250	0.2600	0.5000	0.2500	0.1500	0.1200	
5	0.1500	0.0050	1.0000	0.0050	0.4500	0.0700	
6	0.0000	0.4000	0.4000	0.0250	0.3500	0.1000	
7	0.2000	0.3000	0.1000	0.0600	0.2500	0.1200	
8	0.0000	0.2000	0.0100	0.1000	0.4500	0.1000	
9	0.1000	0.0600	0.0500	0.0800	0.3000	0.1300	
10	0.0500	0.0600	0.2000	0.0500	0.2000	0.0500	
11	0.0750	0.0500	0.5000	0.1200	0.1000	0.0750	
12	0.0100	0.0250	0.8000	0.1500	0.2000	0.1300	
13	0.0050	0.0050	1.0000	0.2000	0.4000	0.1500	
14	0.0000	0.1700	0.6000	0.2500	0.5500	0.1100	
15	0.0000	0.1000	0.2000	0.1000	0.2000	0.2000	
16	0.0050	0.0100	0.4000	0.0100	0.6000	0.2500	
17	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	

Customization of Catalog Sets Available

Lubricating Oil Standards

Product Code						LOE17B
Product	Elements in Lubricating Oil					
Test Method	D4927 D6443 D6481					
Description	Same as LOE17, but also contains Ba Set of 17 Calibration Standards					
Elements	Ba, Ca, P, S, Zn					
Standard Number	Ba Wt%	Ca Wt%	P Wt%	S Wt%	Zn Wt%	
1	0.1000	0.6000	0.0050	0.1750	0.0600	
2	0.1750	0.5000	0.2000	0.0500	0.0800	
3	0.0000	0.4000	0.1500	0.3000	0.1800	
4	0.0250	0.2600	0.2500	0.1500	0.1200	
5	0.1500	0.0050	0.0050	0.4500	0.0700	
6	0.0000	0.4000	0.0250	0.3500	0.1000	
7	0.2000	0.3000	0.0600	0.2500	0.1200	
8	0.0000	0.2000	0.1000	0.4500	0.1000	
9	0.1000	0.0600	0.0800	0.3000	0.1300	
10	0.0500	0.0600	0.0500	0.2000	0.0500	
11	0.0750	0.0500	0.1200	0.1000	0.0750	
12	0.0100	0.0250	0.1500	0.2000	0.1300	
13	0.0050	0.0050	0.2000	0.4000	0.1500	
14	0.0000	0.1700	0.2500	0.5500	0.1100	
15	0.0000	0.1000	0.1000	0.2000	0.2000	
16	0.0050	0.0100	0.0100	0.6000	0.2500	
17	0.0000	0.0000	0.0000	0.0000	0.0000	

Pricing subject to change without prior notice

Lubricating Oil Standards

Product Code						LOE17C
Product	Elements in Lubricating Oil					
Test Method	D4927 D6443 D6481					
Description	Same as LOE17, but also contains Mg Set of 17 Calibration Standards					
Elements	Ca, Mg, P, S, Zn					
Standard Number	Ca Wt%	Mg Wt%	P Wt%	S Wt%	Zn Wt%	
1	0.0000	0.0000	0.0000	0.0000	0.0000	
2	0.5000	0.1500	0.2000	0.0500	0.0800	
3	0.4000	0.3500	0.1500	0.3000	0.1800	
4	0.2600	0.2250	0.2500	0.1500	0.1200	
5	0.0050	0.4500	0.0050	0.4500	0.0700	
6	0.4000	0.5000	0.0250	0.3500	0.1000	
7	0.3000	0.3250	0.0600	0.2500	0.1200	
8	0.2000	0.2500	0.1000	0.4500	0.1000	
9	0.0600	0.1000	0.0800	0.3000	0.1300	
10	0.0600	0.4000	0.0500	0.2000	0.0500	
11	0.0500	0.3000	0.1200	0.1000	0.0750	
12	0.0250	0.2000	0.1500	0.2000	0.1300	
13	0.0050	0.3750	0.2000	0.4000	0.1500	
14	0.1700	0.1750	0.2500	0.5500	0.1100	
15	0.1000	0.4250	0.1000	0.2000	0.2000	
16	0.0100	0.2750	0.0100	0.6000	0.2500	
17	0.6000	0.1000	0.0050	0.1750	0.0600	

Customization of Catalog Sets Available

Lubricating Oil Standards

Product Code							LOE17BC
Product	Elements in Lubricating Oil						
Test Method	D4927 D6443 D6481						
Description	Same as LOE17, but also contains Ba and Mg Set of 17 Calibration Standards						
Elements	Ba, Ca, Mg, P, S, Zn						
Standard Number	Ba Wt%	Ca Wt%	Mg Wt%	P Wt%	S Wt%	Zn Wt%	
1	0.0250	0.6000	0.1000	0.0050	0.1750	0.0600	
2	0.0000	0.5000	0.1500	0.2000	0.0500	0.0800	
3	0.1000	0.4000	0.3500	0.1500	0.3000	0.1800	
4	0.1750	0.2600	0.2250	0.2500	0.1500	0.1200	
5	0.1500	0.0050	0.0000	0.0050	0.4500	0.0700	
6	0.0000	0.4000	0.5000	0.0250	0.3500	0.1000	
7	0.1000	0.3000	0.3250	0.0600	0.2500	0.1200	
8	0.2000	0.2000	0.2500	0.1000	0.4500	0.1000	
9	0.0500	0.0600	0.1000	0.0800	0.3000	0.1300	
10	0.0750	0.0600	0.4000	0.0500	0.2000	0.0500	
11	0.0100	0.0500	0.3000	0.1200	0.1000	0.0750	
12	0.0000	0.0250	0.2000	0.1500	0.2000	0.1300	
13	0.1750	0.0050	0.3750	0.2000	0.4000	0.1500	
14	0.0050	0.1700	0.1750	0.2500	0.5500	0.1100	
15	0.0000	0.1000	0.4250	0.1000	0.2000	0.2000	
16	0.0050	0.0100	0.2750	0.0100	0.6000	0.2500	
17	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	

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Lubricating Oil Standards

Product Code							LOE22
Product	Elements in Lubricating Oil						
Test Method	D4927 D6443 D6481 D7751						
Description	Complete set for ASTM method D6443 Set of 22 Calibration Standards						
Elements	Ca, Cl, Cu, Mg, P, S, Zn						
Standard Number	Ca Wt%	Cl Wt%	Cu Wt%	Mg Wt%	P Wt%	S Wt%	Zn Wt%
1	0.3000	0.0800	0.0300	0.0600	0.0600	0.2750	0.0600
2	0.2500	0.1000	0.0000	0.0100	0.1500	0.0000	0.1500
3	0.5000	0.0000	0.0350	0.1600	0.1500	0.0000	0.0200
4	0.3500	0.0100	0.0000	0.1200	0.0800	0.2000	0.0000
5	0.1100	0.0000	0.0150	0.1000	0.1000	0.3000	0.0500
6	0.2000	0.1000	0.0000	0.2000	0.0500	0.2500	0.1500
7	0.0000	0.0500	0.0250	0.0000	0.0000	0.4500	0.0200
8	0.1500	0.0300	0.0000	0.1000	0.0300	0.4000	0.0400
9	0.2500	0.1500	0.0100	0.1600	0.0000	0.3500	0.0800
10	0.1100	0.1500	0.0400	0.0050	0.0300	0.7500	0.1500
11	0.2600	0.0500	0.0000	0.0000	0.0000	0.7500	0.0000
12	0.2000	0.0000	0.0050	0.1400	0.0800	0.5000	0.0800
13	0.0000	0.0000	0.0050	0.0200	0.0200	0.2000	0.0200
14	0.0700	0.1500	0.0200	0.0800	0.1400	0.6500	0.1500
15	0.0500	0.0000	0.0000	0.0000	0.1500	0.0000	0.0000
16	0.4000	0.0000	0.0010	0.0800	0.0000	0.5000	0.0200
17	0.1800	0.0200	0.0200	0.0000	0.0200	0.6000	0.0600
18	0.4000	0.0100	0.0010	0.0100	0.0200	0.0000	0.0000
19	0.0100	0.0200	0.0400	0.0100	0.0200	0.2000	0.1000
20	0.0500	0.0050	0.0500	0.0000	0.0080	0.0000	0.1200
21	0.2000	0.0500	0.0200	0.0800	0.0500	0.2750	0.0500
22	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Customization of Catalog Sets Available

Lubricating Oil Standards

Product Code								LOE23
Product	Lubricating Oil Elements: Ba, Ca, Cl, Cu, Mg, P, S, Zn							
Test Method	D4927 D6443 D6481							
Description	Same as LOE22, but contains Ba, Set of 23 Calibration Standards							
Standard Number	Ba Wt%	Ca Wt%	Cl Wt%	Cu Wt%	Mg Wt%	P Wt%	S Wt%	Zn Wt%
1	0.1000	0.3000	0.0800	0.0300	0.0600	0.0600	0.2750	0.0600
2	0.1750	0.2500	0.1000	0.0000	0.0100	0.1500	0.0000	0.1500
3	0.0400	0.5000	0.0000	0.0350	0.1600	0.1500	0.0000	0.0200
4	0.0200	0.3500	0.0100	0.0000	0.1200	0.0800	0.2000	0.0000
5	0.1500	0.1100	0.0000	0.0150	0.1000	0.1000	0.3000	0.0500
6	0.0000	0.2000	0.1000	0.0000	0.2000	0.0500	0.2500	0.1500
7	0.2000	0.0000	0.0500	0.0250	0.0000	0.0000	0.4500	0.0200
8	0.0000	0.1500	0.0300	0.0000	0.1000	0.0300	0.4000	0.0400
9	0.0000	0.2500	0.1500	0.0100	0.1600	0.0000	0.3500	0.0800
10	0.0000	0.1100	0.1500	0.0400	0.0050	0.0300	0.7500	0.1500
11	0.1000	0.2600	0.0500	0.0000	0.0000	0.0000	0.7500	0.0000
12	0.0500	0.2000	0.0000	0.0050	0.1400	0.0800	0.5000	0.0800
13	0.0000	0.0000	0.0000	0.0050	0.0200	0.0200	0.2000	0.0200
14	0.0800	0.0700	0.1500	0.0200	0.0800	0.1400	0.6500	0.1500
15	0.0100	0.0500	0.0000	0.0000	0.0000	0.1500	0.0000	0.0000
16	0.0000	0.4000	0.0000	0.0010	0.0800	0.0000	0.5000	0.0200
17	0.0000	0.1800	0.0200	0.0200	0.0000	0.0200	0.6000	0.0600
18	0.0000	0.4000	0.0100	0.0010	0.0100	0.0200	0.0000	0.0000
19	0.1500	0.0100	0.0200	0.0400	0.0100	0.0200	0.2000	0.1000
20	0.0050	0.0500	0.0050	0.0500	0.0000	0.0080	0.0000	0.1200
21	0.1000	0.2000	0.0500	0.0200	0.0800	0.0500	0.2750	0.0500
22	0.1200	0.2000	0.0000	0.0000	0.0000	0.0000	0.7500	0.0000
23	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Standard Number		Description						
DC		Drift Correction Standard						
Ba Wt%	Ca Wt%	Cl Wt%	Cu Wt%	Mg Wt%	P Wt%	S Wt%	Zn Wt%	
0.1000	0.2000	0.0500	0.0200	0.0800	0.0500	0.2750	0.0500	
Standard Number		Description						
QC		Quality Check Standard						
Ba Wt%	Ca Wt%	Cl Wt%	Cu Wt%	Mg Wt%	P Wt%	S Wt%	Zn Wt%	
0.0800	0.0700	0.1500	0.0200	0.0800	0.1400	0.6500	0.1500	

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Lubricating Oil Standards

Product Code		LOEASTM1			
Product	Elements in Lubricating Oil				
Test Method	D4927 D6443 D6481				
Description	Same as LOE 17, but slightly different concentration ranges Set of 17 Calibration Standards				
Elements	Ca, P, S, Zn				
Standard Number	Ca Wt%	P Wt%	S Wt%	Zn Wt%	
1	0.0050	0.0050	0.0500	0.0500	
2	0.6000	0.0000	0.0000	0.0000	
3	0.0000	0.3000	0.0000	0.0000	
4	1.0000	0.0000	1.0000	0.0000	
5	0.0000	0.0000	0.0000	0.3000	
6	0.0050	0.2500	0.8000	0.3000	
7	0.5000	0.1500	0.5000	0.1500	
8	0.0100	0.2000	0.1000	0.2500	
9	0.0500	0.0100	0.4000	0.0750	
10	0.1000	0.1500	0.2000	0.2000	
11	0.2000	0.2000	0.8000	0.1000	
12	0.4000	0.0050	0.8000	0.3000	
13	0.6000	0.1000	0.5000	0.0500	
14	0.8000	0.0100	0.0500	0.1000	
15	1.0000	0.3000	1.0000	0.1500	
16	0.4000	0.0500	0.6000	0.2500	
17	0.0000	0.0000	0.0000	0.0000	

Customization of Catalog Sets Available

Lubricating Oil Standards

Product Code								LOEASTM2
Product	Elements in Lubricating Oil							
Test Method	D4927 D6443 D6481							
Description	Same as LOE10, but also contains Ba Set of 10 Calibration Standards							
Elements	Ba, Ca, Cl, Cu,Mg, P, S, Zn							
Standard Number	Ba Wt%	Ca Wt%	Cl Wt%	Cu Wt%	Mg Wt%	P Wt%	S Wt%	Zn Wt%
1	0.0200	0.0200	0.0300	0.0100	0.2000	0.2500	1.0000	0.0200
2	0.2500	0.0200	0.0200	0.0500	0.2000	0.0200	0.0200	0.2500
3	0.0200	0.0200	0.2000	0.0100	0.0400	0.2500	0.1500	0.2500
4	0.2500	0.0200	0.2000	0.0500	0.0400	0.0200	1.0000	0.0200
5	0.0200	0.4000	0.0200	0.0100	0.0400	0.0200	1.0000	0.2500
6	0.2500	0.4000	0.0200	0.0500	0.0400	0.2500	0.0200	0.0200
7	0.0200	0.4000	0.2000	0.0100	0.2000	0.0200	0.0200	0.0500
8	0.2500	0.4000	0.2000	0.0500	0.2000	0.2500	1.0000	0.2500
9	0.1300	0.2000	0.1000	0.0250	0.0800	0.1500	0.5000	0.1000
10	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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Lubricating Oil Standards

Product Code					LOEASTM4
Product	Elements in Lubricating Oil				
Test Method	D4927 D6443 D6481				
Description	Same as LOEASTM1, but also contains Mg, Set of 17 Calibration Standards				
Elements	Ca, Mg, P, S, Zn				
Standard Number	Ca Wt%	Mg Wt%	P Wt%	S Wt%	Zn Wt%
1	0.0050	0.1000	0.0050	0.0500	0.0500
2	0.6000	0.1500	0.0000	0.0000	0.0000
3	0.0000	0.3500	0.3000	0.0000	0.0000
4	1.0000	0.2250	0.0000	1.0000	0.0000
5	0.0000	0.4500	0.0000	0.0000	0.3000
6	0.0050	0.5000	0.2500	0.8000	0.3000
7	0.5000	0.3250	0.1500	0.5000	0.1500
8	0.0100	0.2500	0.2000	0.1000	0.2500
9	0.0500	0.0500	0.0100	0.4000	0.0750
10	0.1000	0.4000	0.1500	0.2000	0.2000
11	0.2000	0.3000	0.2000	0.8000	0.1000
12	0.4000	0.2000	0.0050	0.8000	0.3000
13	0.6000	0.3750	0.1000	0.5000	0.0500
14	0.8000	0.1750	0.0100	0.0500	0.1000
15	1.0000	0.4250	0.3000	1.0000	0.1500
16	0.4000	0.2750	0.0500	0.6000	0.2500
17	0.0000	0.0000	0.0000	0.0000	0.0000

Customization of Catalog Sets Available

Lubricating Oil Standards

Product Code										EL011-10E-IP
Product	Elements in Lubricating Oil									
Test Method	IP 501									
Description	Elements in Lubricating Oil for Residual Oil Analysis by WDXRF									
Elements	Al, Ca, Fe, Na, Ni, P, S, Si, V, Zn									
Standard Number	Al Wt%	Ca Wt%	Fe Wt%	Na Wt%	Ni Wt%	P Wt%	S Wt%	Si Wt%	V Wt%	Zn Wt%
1	0.0005	0.0010	0.0250	0.0010	0.0050	0.0020	5.000	0.0050	0.0075	0.0010
2	0.0100	0.0075	0.0100	0.0000	0.0005	0.0005	2.0000	0.0100	0.0300	0.0002
3	0.0010	0.0100	0.0000	0.0020	0.0000	0.0010	0.5000	0.0000	0.0350	0.0050
4	0.0025	0.0030	0.0050	0.0200	0.0075	0.0050	4.0000	0.0250	0.0050	0.0040
5	0.0075	0.0040	0.0150	0.0005	0.0100	0.0075	0.3000	0.0200	0.0000	0.0015
6	0.0050	0.0000	0.0075	0.0015	0.0040	0.0100	1.0000	0.0030	0.0100	0.0075
7	0.0150	0.0050	0.0200	0.0100	0.0020	0.0040	0.7250	0.0150	0.0010	0.0000
8	0.0000	0.0005	0.0010	0.0000	0.0010	0.0000	0.1000	0.0010	0.0200	0.0020
9	0.0025	0.0020	0.0005	0.0050	0.0150	0.0025	2.5000	0.0050	0.0005	0.0005
10	0.0050	0.0150	0.0025	0.0150	0.0025	0.0015	3.0000	0.0025	0.0025	0.0010
11	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Pricing subject to change without prior notice

Stabilized Organometallic Solutions

LOMS: Concentrated Liquid Organometallic Solutions (Stabilized, and Ready for Use.)

These concentrated solutions are stabilized with ASI Standards' proprietary chelation and stabilization solutions. These Organometallic solutions can also be used to prepare single-element standards for plasma emission (ICP or DCP), or atomic absorption (AA). The starting materials for the standards are HIGH QUALITY REAGENTS and have been certified against NIST SRMs whenever available.

Products below are the starting materials used in our multi-element sets

DOES NOT CONTAIN PHOSPHORUS OR SULFUR, unless otherwise noted.

TRACE IMPURITIES ARE DOCUMENTED ON THE CERTIFICATE OF ANALYSIS.

Element	Product Code	Conc. Wt%
Aluminum	LOMS-Al3.0	3.00
Antimony	LOMS-Sb2.0	2.00
Arsenic	LOMS-As2.0	2.00
Barium	LOMS-Ba12.5	12.50
Cadmium	LOMS-Cd 10.0	10.00
Calcium	LOMS-Ca5.0	5.00
Cerium	LOMS-Ce5.0	5.00
Chromium	LOMS-Cr3.50	3.50
Cobalt	LOMS-Co7.5	7.50
Copper	LOMS-Cu6.0	6.00
Iron	LOMS-Fe4.0	4.00
Lead	LOMS-Pb20.0	20.00
Lithium	LOMS-Li1.5	1.50
Magnesium	LOMS-Mg3.0	3.00
Manganese	LOMS-Mn6.0	6.00
Molybdenum	LOMS-Mo5.0	5.00
Nickel	LOMS-Ni5.0	5.00
Phosphorus	LOMS-P5.0	5.00
Potassium	LOMS-K7.5	7.50
Selenium	LOMS-Se3.5	3.50
Silicon	LOMS-Si7.5	7.50
Silver	LOMS-Ag1.0	1.00
Sodium	LOMS-Na2.5	2.50
Strontium	LOMS-Sr10.0	10.00
Thallium	LOMS-Tl5.0	5.00
Tin	LOMS-Sn7.5	7.50
Titanium	LOMS-Ti5.0	5.00
Vanadium	LOMS-V4.0	4.00
Yttrium	LOMS-Y2.5	2.50
Zinc	LOMS-Zn6.0	6.00
Zirconium	LOMSZr 5.0	5.00

Customization of Catalog Sets Available

Stabilized Organometallic Solutions

ORMG's: Dilute Single-Element Organometallic Oil Standards

These standards are sulfur-free*, organometallic standards for X-ray fluorescence (XRF), plasma emissions (ICP or DCP), or atomic absorption (AA). They are also stabilized with ASI Standards' proprietary chelation and stabilization solutions.

* unless otherwise noted

ORMG's Dilute Single-Element Organometallic Oil Standards

Element	Product Code	Conc. Wt%
Aluminum	ORMG-AI0.1	0.1000
	ORMG-AI0.5	0.5000
Antimony	ORMG-Sb0.1	0.1000
	ORMG-Sb0.5	0.5000
Arsenic	ORMG-As0.1	0.1000
	ORMG-As0.5	0.5000
Barium	ORMG-Ba0.1	0.1000
	ORMG-Ba0.5	0.5000
Beryllium	ORMG-Be0.1	0.1000
	ORMG-Be0.5	0.5000
Boron	ORMG-B0.1	0.1000
	ORMG-B0.5	0.5000
Cadmium	ORMG-Cd0.1	0.1000
	ORMG-Cd0.5	0.5000
Calcium	ORMG-Ca0.1	0.1000
	ORMG-Ca0.5	0.5000
Cerium	ORMG-Ce0.1	0.1000
	ORMG-Ce0.5	0.5000
Chromium	ORMG-Cr0.1	0.1000
	ORMG-Cr0.5	0.5000
Cobalt	ORMG-Co0.1	0.1000
	ORMG-Co0.5	0.5000
Copper	ORMG-Cu0.1	0.1000
	ORMG-Cu0.5	0.5000
Gallium	ORMG-Ga0.1	0.1000
	ORMG-Ga0.5	0.5000
Gold	ORMG-Au0.1	0.1000
Iron	ORMG-Fe0.1	0.1000
	ORMG-Fe0.5	0.5000
Lead	ORMG-Pb0.1	0.1000
	ORMG-Pb0.5	0.5000
Lithium	ORMG-Li0.1	0.1000
	ORMG-Li0.5	0.5000
Magnesium	ORMG-Mg0.1	0.1000
	ORMG-Mg0.5	0.5000

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Stabilized Organometallic Solutions

ORGM's Dilute Single-Element Organometallic Oil Standards

Element	Product Code	Conc. Wt%
Manganese	ORGM-Mn0.1	0.1000
	ORGM-Mn0.5	0.5000
Mercury	ORGM-Hg0.1	0.1000
	ORGM-Hg0.5	0.5000
Molybdenum	ORGM-Mo0.1	0.1000
	ORGM-Mo0.5	0.5000
Nickel	ORGM-Ni0.1	0.1000
	ORGM-Ni0.5	0.5000
Palladium	ORGM-Pd0.1	0.1000
	ORGM-Pd0.5	0.5000
Phosphorous	ORGM-P0.1	0.1000
	ORGM-P0.5	0.5000
Platinum	ORGM-Pt0.1	0.1000
	ORGM-Pt0.5	0.5000
Potassium	ORGM-K0.1	0.1000
	ORGM-K0.5	0.5000
Selenium	ORGM-Se0.1	0.1000
	ORGM-Se0.5	0.5000
Silicon	ORGM-Si0.1	0.1000
	ORGM-Si0.5	0.5000
Silver	ORGM-Ag0.1	0.1000
	ORGM-Ag0.5	0.5000
Sodium	ORGM-Na0.1	0.1000
	ORGM-Na0.5	0.5000
Strontium	ORGM-Sr0.1	0.1000
	ORGM-Sr0.5	0.5000
Thallium	ORGM-Tl0.1	0.1000
	ORGM-Tl0.5	0.5000
Tin	ORGM-Sn0.1	0.1000
	ORGM-Sn0.5	0.5000
Titanium	ORGM-Ti0.1	0.1000
	ORGM-Ti0.5	0.5000
Vanadium	ORGM-V0.1	0.1000
	ORGM-V0.5	0.5000
Yttrium	ORGM-Y0.1	0.1000
	ORGM-Y0.5	0.5000
Zinc	ORGM-Zn0.1	0.1000
	ORGM-Zn0.5	0.5000
Zirconium	ORGM-Zr0.1	0.1000
	ORGM-Zr0.5	0.5000

Customization of Catalog Sets Available

Stabilized Organometallic Solutions

Internal Standards

Product Code		BIIS
Product	Bismuth Internal Standards	
Test Method	D5059 - Lead in Gasoline by X-Ray	
Description	Pb Analysis; Conc. 0.793g Bi/L, 1 per set	

Product Code		KIS
Product	Potassium Ionization Suppressant	
Test Method	D4628 - Elements in Lube-Oils by AA	
Description	1% Potassium in Mineral Oil 1 per set	

Product Code		MNIS
Product	Manganese Internal Standard	
Test Method	ISO 14597 - Elements in Petroleum Products by X-Ray	
Description	Ni and V Analysis; Conc. 0.05%, 1 per set	

Product Code		ZRIS-1
Product	Zirconium Internal Standard, Low Range	
Test Method	ISO 14596 - Sulfur in Petroleum Products by X-Ray	
Description	1% Low Range, Sulfur Analysis, 1 per set	

Product Code		ZRIS-16
Product	Zirconium Internal Standard, High Range	
Test Method	ISO 14596 - Sulfur in Petroleum Products by X-Ray	
Description	16% High Range, Sulfur Analysis, 1 per set	

Product Code		ZRIS-18
Product	Zirconium Internal Standard, High Range	
Test Method	ISO 14596 - Sulfur in Petroleum Products by X-Ray	
Description	18% High Range, Sulfur Analysis, 1 per set	

Pricing subject to change without prior notice

Multi-Element Wear Metals Standards for ICP, RDE and Other Techniques

Sulfur-Free Multi-Element Wear Metals Standards

Sulfur-free multi-element wear metals in 20 cSt lubricating oil for analysis by XRF, AA, ICP or AE for applications for which sulfur interference is undesirable. These standards are prepared with sulfur-free ORGANOMETALLICS and do not contain sulfonates.

Suitable for ASTM D4628, D4927, D4951, D5056, D5185, D6443, D6481.

WM-11 Standards

Elements: Al, Cr, Cu, Fe, Mg, Na, Ni, Pb, Si, Sn, Ti

Product Code	Description
WM11-10	10 mg/kg
WM11-30	30 mg/kg
WM11-50	50 mg/kg
WM11-100	100 mg/kg
WM11-300	300 mg/kg
WM11-500	500 mg/kg
WM11-750	750 mg/kg
WM11-900	900 mg/kg

Multi-Element Wear Metals Standards for ICP, RDE and Other Techniques

WM-12 Standards

Elements: Ag, Al, Cr, Cu, Fe, Mg, Na, Ni, Pb, Si, Sn, Ti

Product Code	Description
WM12-10	10 mg/kg
WM12-30	30 mg/kg
WM12-50	50 mg/kg
WM12-100	100 mg/kg
WM12-300	300 mg/kg
WM12-500	500 mg/kg
WM12-750	750 mg/kg
WM12-900	900 mg/kg

Customization of Catalog Sets Available

Sulfur-Free Multi-Element Wear Metals Standards

WM-20 Standards

Elements: Al, B, Ba, Ca, Cd, Cr, Cu, Fe, Mg, Mn, Mo, Na, Ni, Pb, P, Si, Sn, Ti, V, Zn

Product Code	Description
WM20-10	10 mg/kg
WM20-30	30 mg/kg
WM20-50	50 mg/kg
WM20-100	100 mg/kg
WM20-300	300 mg/kg
WM20-500	500 mg/kg
WM20-750	750 mg/kg
WM20-900	900 mg/kg

WM-21 Standards

Elements: Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, Mg, Mn, Mo, Na, Ni, P, Pb, Si, Sn, Ti, V, Zn

Product Code	Description
WM21-10	10 mg/kg
WM21-30	30 mg/kg
WM21-50	50 mg/kg
WM21-100	100 mg/kg
WM21-300	300 mg/kg
WM21-500	500 mg/kg
WM21-750	750 mg/kg
WM21-900	900 mg/kg

Pricing subject to change without prior notice

Sulfonated Wear Metals Standards

Sulfonated multi-element wear metals in 20 cSt lubricating oil for analysis by XRF, AA, ICP or AE for applications for which sulfur interference is desirable. Test Methods D4628, D4651, D5056, D5185

Table: A-21 Standards

Elements: Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, Mg, Mn, Mo, Na, Ni, P, Pb, Si, Sn, Ti, V, and Zn in Hydrocarbon Oil

Product Code	Description
A21-10	10 mg/kg
A21-30	30 mg/kg
A21-50	50 mg/kg
A21-100	100 mg/kg
A21-300	300 mg/kg
A21-500	500 mg/kg
A21-900	900 mg/kg

Table: A-22 Standards

Elements: Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, Si, Sn, Ti, V, and Zn in Hydrocarbon Oil

Product Code	Description
A22-10	10 mg/kg
A22-30	30 mg/kg
A22-50	50 mg/kg
A22-100	100 mg/kg
A22-300	300 mg/kg
A22-500	500 mg/kg
A22-900	900 mg/kg

Table: A-23 Standards

Elements: Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Si, Sn, Ti, V, and Zn in Hydrocarbon Oil

Product Code	Description
A23-10	10 mg/kg
A23-30	30 mg/kg
A23-50	50 mg/kg
A23-100	100 mg/kg
A23-300	300 mg/kg
A23-500	500 mg/kg
A23-900	900 mg/kg

Customization of Catalog Sets Available

Reagents

Product Code		DB
Product	Dibenzothiophene, 17.13% Sulfur (Solid)	

Product Code		DBS
Product	Di-N-Butyl Sulfide Certified Reagent, 21.9 wt% Sulfur	

Product Code		TNA
Product	Benzothiophene (Thianaphthene), 23.4% Sulfur	

Stabilization Solutions

For chelating and solubilizing organometallic solids and solutions for single-element and multi-element standards

Product Code		SSA
Product	Stabilization Solution A	

Product Code		SSB
Product	Stabilization Solution B	

Product Code		SSC
Product	Stabilization Solution C	

Product Code		SSD
Product	Stabilization Solution D	

Product Code		SSE
Product	Stabilization Solution E	

Product Code		SSF
Product	Stabilization Solution F	

Pricing subject to change without prior notice

Matrix Oils

Product Code GM	
Product	Gasoline Matrix
Description	Conventional Gasoline with Low level of Sulfur Not Oxygenated

Product Code HVM075	
Product	High Viscosity Mineral Oil
Description	Hydrotreated 350N <1.0 mg/kg Sulfur 75 cSt

Product Code MVM025	
Product	Medium Viscosity Mineral Oil
Description	Hydrotreated 100N <1 mg/kg Sulfur 25 cSt

Product Code LVM04.5	
Product	Low Viscosity Mineral Oil
Description	White Mineral Oil <1 mg/kg Sulfur 4.5 cSt

Product Code RFO	
Product	Synthetic Residual Fuel Oil
Description	Residual Fuel Oil diluted with 100N; Sulfur concentration approximately 0.25 wt%

Product Code SDFM	
Product	Synthetic Diesel Fuel
Description	Mixture of aromatic solvent and low viscosity mineral oil <1mg/kg Sulfur

Product Code TLM	
Product	Certified Toluene Matrix
Description	Toluene certified for Nitrogen and Sulfur. The values will appear on the Certificate of Analysis

Product Code ISOM	
Product	Isooctane Matrix
Description	Isooctane certified for Nitrogen and Sulfur. The values will appear on the Certificate of Analysis

Customization of Catalog Sets Available

Polymer Standards



RoHS/WEEE Compliant Standards for XRF

RoHS/WEEE compliant polymer standards for the analysis of materials in polyethylene(PE) or polvinylchloride(PVC)

Calibration Standards – Polyethylene (PE)

Polyethylene (PE) standards in disc(D) or powder(P) form.

One quality control sample is included with the 9 standard set only.

Pricing subject to change without prior notice

Polymer Standards

Product Code					
PL(PE)9-5E(D)					
PL(PE)9-5E(P)					
Standard Number	Br Wt%	Cd Wt%	Cr Wt%	Hg Wt%	Pb Wt%
1	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0025	0.0025	0.0050	0.0100	0.1000
3	0.0400	0.0100	0.0750	0.0075	0.0250
4	0.0100	0.0125	0.1250	0.0500	0.0050
5	0.0250	0.0075	0.1000	0.0250	0.1250
6	0.0500	0.0010	0.0650	0.0800	0.0750
7	0.0200	0.0005	0.0250	0.1000	0.0100
8	0.0300	0.0050	0.0500	0.0030	0.0500
9	0.0050	0.0150	0.0100	0.1200	0.0350

Additional QC Samples – Polyethylene (PE)

Product Code					
Additional QC Samples for PE Analysis PL(PE)9-5E(D)QC					
Additional QC Samples for PE Analysis PL(PE)9-5E(P)QC					
QC Sample	Br Wt%	Cd Wt%	Cr Wt%	Hg Wt%	Pb Wt%
1	0.0250	0.0050	0.0500	0.0500	0.0500

Check Standards – Polyethylene (PE)

Polyethylene (PE) standards in disc(D) or powder(P) form.

Product Code					
PL(PE)3-5E(D)					
PL(PE)3-5E(P)					
Standard Number	Br Wt%	Cd Wt%	Cr Wt%	Hg Wt%	Pb Wt%
1	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0250	0.0050	0.0500	0.0500	0.0500
3	0.0500	0.0100	0.1000	0.1000	0.1000

Customization of Catalog Sets Available

Polymer Standards

Calibration standards – Polyvinyl Chloride (PVC)

Polyvinyl Chloride (PVC) standards in disc(D) or powder(P) form. PVC's also include some Ca and Cl in each sample. One quality control sample is included with the 9 standard set only.

Product Code							
PL(PVC)9-5E(D)							
PL(PVC)9-5E(P)							
Standard Number	Br Wt%	Cd Wt%	Cr Wt%	Hg Wt%	Pb Wt%	Ca Wt%	Cl Wt%
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	40.0000
2	0.0025	0.0025	0.0050	0.0100	0.1000	0.0500	35.0000
3	0.0400	0.0100	0.0750	0.0075	0.0250	1.5000	15.0000
4	0.0100	0.0125	0.1250	0.0500	0.0050	0.2500	40.0000
5	0.0250	0.0075	0.1000	0.0250	0.1250	0.0000	35.0000
6	0.0500	0.0010	0.0650	0.0800	0.0750	3.0000	10.0000
7	0.0200	0.0005	0.0250	0.1000	0.0100	2.0000	40.0000
8	0.0300	0.0050	0.0500	0.0030	0.0500	0.0000	12.5000
9	0.0050	0.0150	0.0100	0.1200	0.0350	0.0000	35.0000

Additional QC Samples – Polyvinyl Chloride (PVC)

Product Code					
Additional QC Samples for PVC Analysis PL(PVC)9-5E(D)QC					
Additional QC Samples for PVC Analysis PL(PVC)9-5E(P)QC					
QC Sample	Br Wt%	Cd Wt%	Cr Wt%	Hg Wt%	Pb Wt%
1	0.0250	0.0050	0.0500	0.0500	0.0500

Check Standards – Polyvinyl Chloride (PVC)

Polyvinyl chloride (PVC) standards in disc(D) or powder(P) form.

Product Code					
PL(PVC)3-5E(D)					
PL(PVC)3-5E(P)					
Standard Number	Br Wt%	Cd Wt%	Cr Wt%	Hg Wt%	Pb Wt%
1	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0250	0.0050	0.0500	0.0500	0.0500
3	0.0500	0.0100	0.1000	0.1000	0.1000

Pricing subject to change without prior notice

Polymer Standards

Additive Package

PE Additive Package includes 5 Standards with 10 elements each.

The elements included are: Al, Ca, F, Mg, Na, P, S, Si, Ti and Zn.

Product Code										
PL(PE)5-10E(D)										
Standard Number	Al mg/kg	Ca mg/kg	F mg/kg	Mg mg/kg	Na mg/kg	P mg/kg	S mg/kg	Si mg/kg	Ti mg/kg	Zn mg/kg
1	0	0	0	0	0	0	0	0	0	0
2	25	100	250	25	50	100	50	750	20	10
3	200	50	75	250	10	25	25	25	100	200
4	400	20	150	550	100	5	5	125	5	50
5	75	200	25	100	200	50	200	300	50	100

For additives and trace elements in polyolefins. Includes all elements in PL(PE)5-10E(D) plus Cr (11 elements). Concentrations based on Table 1 of Test Method D6247.

Product Code										
PL(PE)D6247										

Customization of Catalog Sets Available

Polymer Standards

Nitrogen In Solid Polymer For Quality Control

Finely divided synthetic polymer solid that contains a certified amount of nitrogen. Used for calibrating instruments for the analysis of nitrogen in all types of polymers and other solids that are completely combustible. Concentration Range: 0-3.0 wt% Nitrogen

Product Code

NP

Sulfur In Solid Polymer For Quality Control

Finely divided synthetic polymer solid that contains a certified amount of sulfur. Used for calibrating instruments for the analysis of sulfur in all types of polymers and other solids that are completely combustible. Concentration Range: 0-5.0 wt% Sulfur

Product Code

SP

Nitrogen And Sulfur In Solid Polymer For Quality Control

Finely divided synthetic polymer solid that contains a certified amount of nitrogen and sulfur. Used for calibrating instruments for the analysis of nitrogen and sulfur in all types of polymers and other solids that are completely combustible. Concentration Range: 0-1.0 wt% Nitrogen and Sulfur

Product Code

NSP

Pricing subject to change without prior notice

Lead Standards in Paint Coatings on Polyester Film

2 mil thickness polyester squares

1.6 mil (40 microns) paint coating thickness

Developed for ASTM WK 21957 "Standard Test Method for Identification and Quantification of Lead in Paint and Similar Coating Materials Using EDXRF" and "New Test Method for Detection and Quantification of Lead in Paint Layers and Similar Coatings or in Substrates by EDXRF using Multiple Monochromatic Excitation Beams"

Product Code		Pb-2mPEF7
Product	Lead (Pb) in Alkyd paint coating on Polyester Film	
Description	7 standards cut as squares per set. Conc: 0.00, 0.375, 0.75, 2.00, 5.50, 12.00 µg/cm ² QC Standard Conc: 0.80 µg/cm ²	

Product Code		Pb-2mPEFQC
Product	Lead (Pb) in Alkyd paint coating on Polyester Film	
Description	QC Standard only - one standard Conc. 0.80 µg/cm ²	

Customization of Catalog Sets Available

Titration Standards



© Asi Standards



© Asi Standards

Hydrogen Sulfide and Mercaptan Standards for UOP 163

Ampoules for titration analysis

20 mg/kg H₂S and 40 mg/kg Mercaptan

Product Code		H2SRSH-20
Description	20 ml	

Product Code		H2SRSH-2
Description	2 ml	

Bromine Index for ASTM D2710

Product Code		Brl3	Bromine Index
Product	Bromine Index		10
Description	Bromine Index in Toluene, 3 standards per set 200 ml each		100
			1000

Pricing subject to change without prior notice

Titration Standards

Bromine Number for ASTM D1159

Product Code		BrNo2	Bromine Number
Product	Bromine Number		2
Description	Bromine Number in Toluene 2 standards per set 200 ml each		10

Total Acid Number for ASTM D664

Product Code		TAN2	Acid Number
Product	Total Acid Number		2
Description	Total Acid Number in Mineral Oil 2 standards per set 500 ml each		5

Base Number for ASTM D2896 and D5984

Total Base Number standards

Product Code		BN03	Base Number
Product	Total Base Number standards		2
Description	Total Base Number in Mineral Oil 3 standards per set 500 ml each		5
			10

Nitrogen Bases In Hydrocarbons

Product Code		N-UOP269
Product	Organic Nitrogen in Petroleum Distillates	
Description	Organic Nitrogen in Petroleum Distillates Conc.: 0.01, 0.05, 0.10, 1.0 wt% 4 standards per set, 200 ml each	

Customization of Catalog Sets Available

Physical Testing Standards

ASTM D97 Pour Point Standards

Pour Points are determined by consensus analysis and are packaged in 250 ml bottles.

Product Code	Approx. Pour Point
PP5	-5 °C
PP10	-10 °C
PP15	-15 °C
PP20	-20 °C
PP40	-40 °C
PP50	-50 °C

ASTM D2386 Freezing Point Standards

Freezing Points are verified by consensus analysis and are packaged in 250 ml amber bottles

Product Code	Nominal Freeze Point
FPZ45	-45 °C
FPZ50	-50 °C

ASTM D2500 Cloud Point Standards

Cloud Points are determined by consensus analysis and are packaged in 250 ml bottles.

Product Code	Approx. Cloud Point
CP2	-2 °C
CP5	-5 °C
CP10	-10 °C
CP15	-15 °C
CP20	-20 °C

Pricing subject to change without prior notice

Physical Testing Standards

ASTM D445 Viscosity Standards

Oils are tested in accordance with ASTM D445 and are packaged in 500 ml amber glass bottles.

Product Code	Viscosity @ 40 °C
VIS4	4 cSt
VIS10	9.5 cSt
VIS30	30 cSt
VIS60	54 cSt
VIS100	102 cSt
VIS110	110 cSt
VIS120	120 cSt
VIS360	360 cSt
VIS520	520 cSt
VIS920	920 cSt

Customization of Catalog Sets Available

Physical Testing Standards

ASTM D5482/D5191 Vapor Pressure Standards

ASI Standards offers a range of vapor pressure quality control samples for ASTM D5482 and D5191 (mini-methods), consisting of pure solvents of known vapor pressure. The samples are packaged in 10 ml flame sealed ampoules.

Product Code	Vapor Pressure
VP1	68.3 kPa (9.91 p.s.i)
VP2	68.0 kPa (9.86 p.s.i)
VP3	51.1 kPa (7.41 p.s.i)
VP4	46.7 kPa (6.77 p.s.i)
VP5	22.5 kPa (3.26 p.s.i)
VP6	7.1 kPa (1.03 p.s.i)

ASTM D86 Group 4 Distillation Standard

The group 4 standard is diesel oil characterized with distillation, range is from 410 to 670°F, (210 to 355 °C) and is verified by consensus analysis.

Product Code	Description
D86-4-1	Distillation Standard 0.25L
D86-4-2	Distillation Standard 0.50L

ASTM D86 Groups 1 & 2 Distillation Standard

The automatic distillation apparatus duplicates the distillation conditions of the manual method. The increased reliance on electronic control requires an independent standard to verify that the apparatus is performing correctly. ASI Standards has introduced a synthetic blend of hydrocarbons that boil in the temperature range specified in ASTM D86 distillation groups 1 and 2. The group 1 and 2 standard covers the boiling range 129 to 368°F, (54 to 187 °C) and was verified by consensus analysis with twelve refinery laboratories.

Product Code	Description
D86-1	Synthetic Distillation Std. 0.5L
D86-2	Synthetic Distillation Std. 2 x 0.5L

Pricing subject to change without prior notice

Physical Testing Standards

ASTM D92 Cleveland Open Cup Flash Point

Standards are verified by consensus analysis and are packaged in 250 ml amber glass bottles.

Product Code	Flash Point
FP200	200 °C
FP230	230 °C

ASTM D93 Pensky Martin Flash Point

Standards are verified by consensus analysis and are packaged in 250 ml amber glass bottles.

Product Code	Flash Point
FP60	60 °C
FP65	65 °C
FP93	93 °C
FP134Hex	134 °C

ASTM D56 Tag Closed Cup Flash Point

Standards are verified by consensus analysis and packaged in 250ml amber glass bottles.

Product Code	Nominal Flash Point
TCC68	67 °C

Customization of Catalog Sets Available

Biodiesel Testing Standards

Suitable for ASTM D6751

Sulfur in Biodiesel

Product Code S(BIO)6L	
Product	Sulfur in Biodiesel
Test Method	D5453
Description	Low Range: 6 Standards per set, 100 ml each - Conc 0, 5, 10, 15, 20 and 25 mg/kg

Product Code S(BIO)6H	
Product	Sulfur in Biodiesel
Test Method	D5453
Description	High Range: 6 Standards per set, 100 ml each - Conc 0, 200, 400, 600, 800 and 1000 mg/kg

Free And Total Glycerin

Product Code D6584-MIX	
Product	Combined Standards
Test Method	D6584 EN14105
Description	Kit contains: 4 Standards containing the 4 glycerin components and: Butanetriol internal standard at 1000 ng/μl in pyridine-5 ml ampoule Tricaprin internal standard at 800 mg/μl in pyridine-5 ml ampoule MSTFA silyating reagent-5 ml vial with cap 250ml bottle of heptane

Product Code D6584-SS	
Product	Individual Standards
Test Method	D6584 EN14105
Description	Kit contains 7 Standards: Glycerin in pyridine at 500 ng/μl Monoolein in pyridine at 5000 ng/μl Diolein in pyridine at 500 ng/μl 1, 2, 3 -Tri[cisoctadecanoyl] in pyridine at 5000 ng/μl Butanetriol internal standard at 1000 ng/μl in pyridine Tricaprin internal standard at 8000 ng/μl in pyridine MSTFA all in 5 ml ampoules or vial -1 250ml bottle of heptane

Pricing subject to change without prior notice

Biodiesel Testing Standards

Free And Total Glycerin

Product Code D6584-50kit	
Product	Individual Standards
Test Method	D6584 EN14105
Description	Enough for 50 GC runs, Internal Standard #1 and 2 and MSTFA all in 5 ml ampoules

Product Code D6584-100kit	
Product	Individual Standards
Test Method	D6584 EN14105
Description	Enough for 100 GC runs, Internal Standard #1 and 2 and MSTFA all in 10 ml ampoules

Product Code D6584-250kit	
Product	Individual Standards
Test Method	D6584 EN14105
Description	Enough for 250 GC runs, Internal Standard #1 and 2 and MSTFA all in 25 ml bottles

Product Code D6584-500kit	
Product	Individual Standards
Test Method	D6584 EN14105
Description	Enough for 500 GC runs, Internal Standard #1 and 2 and MSTFA all in 50 ml bottles

Customization of Catalog Sets Available

Biodiesel Testing Standards

Sodium and Potassium UOP 391 or DIN EN4538

Product Code EN14538	
Product	Calibration Standards
Test Method	UOP391 EN14538
Description	Multi-elements Standard 500 mg/kg, each in 100 ml bottle
Elements	Ca, Mg, K, Na

Product Code EN14538-2C	
Product	Calibration Standards
Test Method	UOP391 EN14538
Description	Multi-elements Standard at 20 mg/kg and 100 mg/kg, 2 standards per set: each in 100 ml bottle
Elements	Ca, Mg, K, P, Na

Simulated Distillation

Product Code D2887	
Product	Diesel Reference
Test Method	D2887
Description	6 x 2 ml ampoules per set

Methanol in FAME

Product Code EN14110	
Product	Methanol in FAME
Test Method	EN14110
Description	3 standards per set and 20 ml ampoule of 2-propanol

Fatty Acid Methyl Esters (FAME) Analysis

Product Code EN14103	
Product	Fatty Acid Methyl Esters (FAME) analysis
Test Method	EN14103
Description	3 x 2 ml ampoules

Product Code EN14103-IS	
Product	Fatty Acid Methyl Esters (FAME) analysis
Test Method	EN14103
Description	Methyl Nonadecanoate in Toluene, 10 mg/ml, 1 per set, 100 ml each

Pricing subject to change without prior notice

Biodiesel Testing Standards

Iodine Value

Product Code		EN14214
Product	Iodine Value	
Test Method	EN14214	
Description	Iodine Number 50 and 200, 2 standards per set, 500 ml each	

Hexane Residue in Fats and Oil

Product Code		HexMe05
Product	Hexane Residue in Fats and Oil	
Test Method	EN14103	
Description	Hexane in Methyloleate: Conc. Blk, 10, 100, 500 and 1,500 mg/kg, 5 per set, 20 ml ampoules - 20 ml ampoule of Heptane (Internal Standard)	

Customization of Catalog Sets Available

Chemplex® Thin-Film Sample Supports

Continuous Rolls: 3" x 300' long (7.6cm x 91.4m) *Supplied in 50' (15.2m) lengths

Product Code	Description	Gauge
90	Ultra-Polyester	1.5µm (0.06mil)
95	Etnom®	1.5µm (0.06mil)
100	Mylar	2.5µm (0.10mil)
150	Mylar	3.6µm (0.14mil)
250	Mylar	6.0µm (0.24mil)
416	Prolene®	4.0µm (0.16mil)
425	Polypropylene	6.0µm (0.24mil)
475	Polypropylene	12.0µm (0.50mil)

Precut Circles: 500 pcs/pkg: 2.5" Dia. (6.4cm)

Product Code	Description	Gauge
106	Mylar	2.5µm (0.10mil)
156	Mylar	3.6µm (0.14mil)
256	Mylar	6.0µm (0.24mil)
426	Prolene®	4.0µm (0.16mil)
436	Polypropylene	6.0µm (0.24mil)
476	Polypropylene	12.0µm (0.50mil)

Precut Circles: 1,000 pcs/pkg: 2.5" Dia. (6.4cm)

Product Code	Description	Gauge
107	Mylar	2.5µm (0.10mil)
157	Mylar	3.6µm (0.14mil)
257	Mylar	6.0µm (0.24mil)
427	Prolene®	4.0µm (0.16mil)
437	Polypropylene	6.0µm (0.24mil)
477	Polypropylene	12.0u (0.50mil)

Pricing subject to change without prior notice

Chemplex® – Spectromembrane®

Thin-Film Supports

Product Code	Description	Gauge	Dia. In.
3011	Mylar	2.5µm (0.10mil)	2.5
3012	Mylar	2.5µm (0.10mil)	3.0
3013	Mylar	3.6µm (0.14mil)	2.5
3014	Mylar	3.6µm (0.14mil)	3.0
3015	Mylar	6.0µm (0.24mil)	2.5
3016	Mylar	6.0µm (0.24mil)	3.0
3017	Prolene®	4.0µm (0.16mil)	2.5
3017A	Prolene®	3.0µm (0.12mil)	2.5
3018	Prolene®	4.0µm (0.16mil)	3.0
3018A	Prolene®	3.0µm (0.12mil)	3.0
3019	Polypropylene	6.0µm (0.24mil)	2.5
3020	Polypropylene	6.0µm (0.24mil)	3.0
3023	Polypropylene	12.0µm (0.50mil)	2.5
3024	Polypropylene	12.0µm (0.50mil)	3.0
3025	Etnom®	3.0µm (0.12mil)	2.5
3026	Etnom®	3.0µm (0.12mil)	3.0
3029	Etnom®	2.5µm (0.10mil)	2.5
3030	Etnom®	2.5µm (0.10mil)	3.0
3031	Etnom®	2.0µm (0.08mil)	2.5
3032	Etnom®	2.0µm (0.08mil)	3.0

Chemplex® – Microporous Film

Thin-Film Supports

Product Code	Description
325	Continuous Roll: 3" x 200" (7.6cm x 508cm)
325C	Pre-Cut Circles: 2.5" Diameter; 100/pkg

Customization of Catalog Sets Available

Chemplex® – Pelletcups®

Compressible Straight -Walled Aluminum

Product Code	Description	Pcs/Pkg
500	30.3mm	1000
530	33.8mm	600
540	38.9mm	600

Compressible Tapered Aluminum

Product Code	Description	Pcs/Pkg
505	31.0mm	1000
535	34.6mm	600
545	39.8mm	600
547	44.9mm	500

Compressible Tapered Plastic; PlastiCups

Product Code	Description	Pcs/Pkg
552	31.0mm	500
555	34.3mm	500
554	39.7mm	500

XRF Sample Cup Caps- Vented, Polyethylene Plastic

Product Code	Size (mm)
1630	32 (Nominal)
1640	40 (Nominal)

Pricing subject to change without prior notice

Chemplex® – Sample Cups

XRF Sample Cups: Polyethylene plastic: 100 sets/pkg

Product Code	Dia. (mm)
1060	31.2
1065	31.2
1067	42.1
1068	42.1
1070	38.6
1075	38.4
1083	42.9
1085	42.9
1095	43.4
1330	30.7
1330-SE	30.7
1340	39.0
1430	30.7
1430-SE	30.7
1440	39.3
1440L	39.3
1530	30.9
1530-SE	30.9
1540	39.3
1730	30.4
1730-SE	30.4
1740	39.0
1830	39.0
1830-SE	39.0
1840	39.2
1850	42.9
1930	31.0
1930-SE	31.0
1935-0X	31.2

Customization of Catalog Sets Available

Chemplex® – Sample Cups

XRF Sample Cups: Polyethylene plastic: 100 sets/pkg **Formerly 1540L*

Product Code	Dia. (mm)
1940	39.1
1940L*	39.1
2131	31.2
2132	31.5
2135	34.3
2140	40.1
2143	40.1
2144	40.1
2145	44.7
2146	44.7
2195	43.4
3106	30.6
3110	30.6
3115	30.6
3120	30.6

Plastic Disposable Pipettes

Product Code	Size	Per Box
13-711-26 (691)	Large Tip	250
13-711-30 (234)	Fine Tip	400

Pricing subject to change without prior notice

Periodic Table of Elements

1 H Hydrogen																	2 He Helium
3 Li Lithium	4 Be Beryllium											5 B Boron	6 C Carbon	7 N Nitrogen	8 O Oxygen	9 F Fluorine	10 Ne Neon
11 Na Sodium	12 Mg Magnesium											13 Al Aluminium	14 Si Silicon	15 P Phosphorus	16 S Sulfur	17 Cl Chlorine	18 Ar Argon
19 K Potassium	20 Ca Calcium	21 Sc Scandium	22 Ti Titanium	23 V Vanadium	24 Cr Chromium	25 Mn Manganese	26 Fe Iron	27 Co Cobalt	28 Ni Nickel	29 Cu Copper	30 Zn Zinc	31 Ga Gallium	32 Ge Germanium	33 As Arsenic	34 Se Selenium	35 Br Bromine	36 Kr Krypton
37 Rb Rubidium	38 Sr Strontium	39 Y Yttrium	40 Zr Zirconium	41 Nb Niobium	42 Mo Molybdenum	43 Tc Technetium	44 Ru Ruthenium	45 Rh Rhodium	46 Pd Palladium	47 Ag Silver	48 Cd Cadmium	49 In Indium	50 Sn Tin	51 Sb Antimony	52 Te Tellurium	53 I Iodine	54 Xe Xenon
55 Cs Cesium	56 Ba Barium	57 La [*] Lanthanum	72 Hf Hafnium	73 Ta Tantalum	74 W Tungsten	75 Re Rhenium	76 Os Osmium	77 Ir Iridium	78 Pt Platinum	79 Au Gold	80 Hg Mercury	81 Tl Thallium	82 Pb Lead	83 Bi Bismuth	84 Po Polonium	85 At Astatine	86 Rn Radon
87 Fr Francium	88 Ra Radium	89 Ac ^{**} Actinium	104 Rf Rutherfordium	105 Db Dubnium	106 Sg Seaborgium	107 Bh Bohrium	108 Hs Hassium	109 Mt Meitnerium	110 Ds Darmstadtium	111 Rg Roentgenium	112 Cn Copernicium	113 Uut Ununtrium	114 Uuq Ununquadium	115 Uup Ununpentium	116 Uuh Ununhexium	117 Uus Ununseptium	118 Uuo Ununoctium

[*] 58 Ce Cerium	59 Pr Praseodymium	60 Nd Neodymium	61 Pm Promethium	62 Sm Samarium	63 Eu Europium	64 Gd Gadolinium	65 Tb Terbium	66 Dy Dysprosium	67 Ho Holmium	68 Er Erbium	69 Tm Thulium	70 Yb Ytterbium	71 Lu Lutetium
^{**} 90 Th Thorium	91 Pa Protactinium	92 U Uranium	93 Np Neptunium	94 Pu Plutonium	95 Am Americium	96 Cm Curium	97 Bk Berkelium	98 Cf Californium	99 Es Einsteinium	100 Fm Fermium	101 Md Mendelevium	102 No Nobelium	103 Lr Lawrencium



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