

SCP SCIENCE manufactures and distributes products for X-Ray Fluorescence Spectroscopy. In addition to popular binders and fusion fluxes, a complete list of sulfur and oil standards are available in this chapter.

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Binder & Blending Agents

Often, a binder or blending material must be added to a sample prior to formation of a pressed pellet. This material helps keep the pressed pellet from flaking or disintegrating. **SCP SCIENCE** offers the most popular formulations of binder & blending agents in use today.

- Available in 454 g package size
- For a complete list, please review the Instrument & Supplies Catalog or contact your Customer Service Representative

XRF Fusion Fluxes

SCP SCIENCE fluxes are supplied dust free, in homogeneous spherical vitreous particles with less than 0.05% moisture. Choose from single fluxes or a variety of mixed fluxes, ranging from 90% LiT/10% LiM to 20% LiT/80% LiM, or request a custom blend for your application. Depending on your analytical requirements, two flux grades; Pure and Ultra Pure, are available. Used in cements, ceramics and glassmakers, Mining Industries, Metal Producers, and R & D Laboratories - Petrochemical plants.



- Eliminate risks associated with crucibles overflowing
 - High bulk density of 1.4 g/cm³
- Offer higher analytical accuracy
 - Spherical (<500 um) and vitreous particles are easy to handle
- Two purity levels for Lithium borate fluxes are available
 - High Purity 99.999% best choice for ICP-AES/MS Analysis
 - Pure 99.99% most popular in XRF analysis
- Complete with a detailed Certificate of Analysis
 - (99.99% and 99.999% pure), lot number and the concentration of analytes determined by ICP-AES

Custom Blends Available!

Fusion Flux	Grade	Quantity	Code	Catalog Number
Lithium Tetraborate (LiT)	PURE	1 kg		040-060-200
Lithium Tetraborate (LiT)	ULTRA PURE	1 kg		040-060-205
Lithium Metaborate (LiM)	PURE	1 kg		040-060-100
Lithium Metaborate (LiM)	ULTRA PURE	1 kg		040-060-102
LiT/LiM 50/50	PURE	1 kg		040-060-250
LiT/LiM/LiBr 49.75/49.75/0.50	PURE	1 kg		040-060-249
LiT/LiM 67/33	PURE	1 kg		040-060-267
LiT/LiM/LiBr 66.67/32.83/0.50	PURE	1 kg		040-060-266
LiT/LiM/LiI 66.67/32.83/0.50	PURE	1 kg		040-060-268
Lithium Bromide	Non-Wetting Agent	15 ml		040-060-330

Other products and combinations are available. Contact your Customer Service Representative.

⊗ Glass Container
✓ Dangerous Goods*

Ⓢ Poison
Ⓢ Corrosive

Ⓢ Flammable
Ⓢ Oxidant

* as defined by :

* Hazardous Materials Regulations of the U.S. Department of Transportation, Tariff No. BOE-6000-R
* Canadian Transportation of Dangerous Goods Act and Regulations, Revision December 2000
* International Air Transport Association - Dangerous Goods Regulation, 40th Edition

Sulfur in Oil Calibration Standards

XRF analysis for sulfur in oil requires matrix matching in order to guarantee accurate results. Sulfur in Oil Standards are available in #2 Diesel Fuel, White Mineral Oil, Kerosene, and NEW Iso-Octane. Expanded product lines offer more selection to meet your sulfur analysis requirements.

- Available as individual standards or complete sets
- Concentrations range from 0.0000% to 6%
- Complete with a Certificate of Analysis



Sulfur in #2 Diesel Fuel (125 ml bottle)

Concentration (wt%)	Code	Catalog Number
0.0000	✓ ③ ⊗	140-081-002
0.0005	✓ ③ ⊗	140-081-018
0.0010	✓ ③ ⊗	140-081-001
0.0025	✓ ③ ⊗	140-081-005
0.0050	✓ ③ ⊗	140-081-003
0.0075	✓ ③ ⊗	140-081-020
0.0100	✓ ③ ⊗	140-081-004
0.0200	✓ ③ ⊗	140-081-006
0.0300	✓ ③ ⊗	140-081-008
0.0400	✓ ③ ⊗	140-081-010
0.0500	✓ ③ ⊗	140-081-012
0.0750	✓ ③ ⊗	140-081-014
0.1000	✓ ③ ⊗	140-081-016
0.1500	✓ ③ ⊗	140-082-002
0.3000	✓ ③ ⊗	140-082-004
0.5000	✓ ③ ⊗	140-082-006
0.7500	✓ ③ ⊗	140-082-009
1.0000	✓ ③ ⊗	140-082-010
1.5000	✓ ③ ⊗	140-082-012
2.0000	✓ ③ ⊗	140-082-014
3.0000	✓ ③ ⊗	140-082-016
4.0000	✓ ③ ⊗	140-082-018
5.0000	✓ ③ ⊗	140-082-020
6.0000	✓ ③ ⊗	140-082-022

Complete Set

Range	Code	Catalog Number
Low Range (0.00-0.10)	✓ ③ ⊗	140-081-000
High Range (0.15-6.0)	✓ ③ ⊗	140-082-000

Sulfur in Mineral Oil (125 ml bottle)

Concentration (wt%)	Code	Catalog Number
0.0000	⊗	140-083-002
0.0005	⊗	140-083-009
0.0010	⊗	140-083-001
0.0025	⊗	140-083-003
0.0050	⊗	140-083-005
0.0075	⊗	140-083-011
0.0100	⊗	140-083-004
0.0200	⊗	140-083-006
0.0300	⊗	140-083-008
0.0400	⊗	140-083-010
0.0500	⊗	140-083-012
0.0750	⊗	140-083-014
0.1000	⊗	140-083-016
0.1500	⊗	140-084-002
0.3000	⊗	140-084-004
0.5000	⊗	140-084-006
0.7500	⊗	140-084-008
1.0000	⊗	140-084-010
2.0000	⊗	140-084-014
3.0000	⊗	140-084-016
4.0000	⊗	140-084-018
5.0000	⊗	140-084-020

Complete Set

Range	Code	Catalog Number
Low Range (0.00-0.10)	⊗	140-083-000
High Range (0.15-5.0)	⊗	140-084-000

⊗ Glass Container
✓ Dangerous Goods*

⑥ Poison
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⑤ Oxidant

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Sulfur in Oil Calibration Standards

Sulfur in Residual Oil (125 ml bottle)

Concentration (wt%)	Code	Catalog Number
0.35	⊗	140-074-101
0.70	⊗	140-074-103
1.00	⊗	140-074-105
1.50	⊗	140-074-107
2.00	⊗	140-074-109
3.00	⊗	140-074-111
4.00	⊗	140-074-113

Complete Set

Range	Code	Catalog Number
Low Range (0.15-4.0)	⊗	110-103-180
High Range (6.0-20.0)	⊗	110-103-220

Sulfur in Kerosene (125 ml bottle)

Concentration (wt%)	Code	Catalog Number
0.0010	✓ ③ ⊗	140-085-001
0.0050	✓ ③ ⊗	140-085-005
0.0100	✓ ③ ⊗	140-085-004
0.0300	✓ ③ ⊗	140-085-006
0.0500	✓ ③ ⊗	140-085-008
0.0750	✓ ③ ⊗	140-085-010
0.1000	✓ ③ ⊗	140-085-012

Complete Set

Range	Code	Catalog Number
Low Range (0.00-0.10)	✓ ③ ⊗	140-085-000

Sulfur in Iso-Octane (125 ml bottle)

Concentration (wt%)	Code	Catalog Number
0.0000	✓ ③ ⊗	140-077-001
0.0005	✓ ③ ⊗	140-077-002
0.0010	✓ ③ ⊗	140-077-004
0.0025	✓ ③ ⊗	140-077-006
0.0050	✓ ③ ⊗	140-077-008
0.0075	✓ ③ ⊗	140-077-010
0.0100	✓ ③ ⊗	140-077-012
0.0200	✓ ③ ⊗	140-077-014
0.0300	✓ ③ ⊗	140-077-016
0.0400	✓ ③ ⊗	140-077-018
0.0500	✓ ③ ⊗	140-077-020
0.0750	✓ ③ ⊗	140-077-022
0.100	✓ ③ ⊗	140-077-024
0.300	✓ ③ ⊗	140-077-028

Complete Set

Range	Code	Catalog Number
Low Range (0.000 - 0.300)	✓ ③ ⊗	140-077-000

⊗ Glass Container
✓ Dangerous Goods*

⑥ Poison
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X-Ray Fluorescence Analysis

A variety of sample preparation and supply items are available.

- A range of thin film materials
- Plastic sample cups for major XRF instrument manufacturers
- Volume discounts on cups and film available



Oil-Based Standards

Oil-based metal standards are available for emission and XRF analysis.

- Common multi-element blends and single element standards are shipped from stock
- Custom formulations are available on special order



Certificate of Analysis

Fusion Flux

X-Ray Fluorescence
Spectroscopy

Certificate of Analysis

Catalogue numbers

040-060-205

Description

AccuSPEC – Lithium Tetraborate,
Anhydrous, Fused; Ultra Pure
99.999%

Lot Number

SC4254064

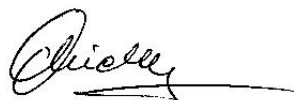
$$\text{Li}_2\text{B}_4\text{O}_7$$

Assay ($\text{Li}_2\text{B}_4\text{O}_7$) : 100%
Apparent Density : 1.4
Loss on Ignition : < 0.01% (2hrs @ 300°C)
Loss on Fusion : < 0.01% (@ 1000°C)
Granulometry : 100% (< 500µm)

Trace Metallic Impurities

Elements	Concentration	Elements	Concentration
Ag	< 1 ppm	Mn	< 1 ppm
Al	< 1 ppm	Mo	< 1 ppm
Ba	< 1 ppm	Na	< 2 ppm
Be	< 1 ppm	Ni	< 1 ppm
Bi	< 1 ppm	P	< 3 ppm
Ca	2 ppm	Pb	< 2 ppm
Cd	< 1 ppm	S	< 3 ppm
Ce	< 1 ppm	Sc	< 1 ppm
Co	< 1 ppm	Si	< 3 ppm
Cr	< 1 ppm	Sr	< 1 ppm
Cu	< 1 ppm	Th	< 1 ppm
Eu	< 1 ppm	Ti	< 1 ppm
Fe	2 ppm	V	< 1 ppm
K	< 3 ppm	Y	< 1 ppm
La	< 1 ppm	Zn	< 1 ppm
Mg	< 1 ppm	Zr	< 1 ppm

Certified by :



Alketa Mixha, Chemist

Date of certification : September 10, 2004

This material has been tested by Acidimetry (assay) and ICP-OES (impurities). The Material Safety Data Sheet and this Certificate of Analysis are available on our web site. (Ce certificat est également disponible en français)

Manufactured according to an ISO 9001:2000 Quality System and ISO 17025 (in-process)

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Europe

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Certificate of Analysis: Sulfur in Oil Standard

X-Ray Fluorescence
Spectroscopy

Certificate of Analysis

Catalog number
Description

140-081-001
Sulfur in #2 Diesel Fuel Standard
S @ 0.0010 % w/w
SC5032547
July 2006

Lot number
Expiration Date

Concentrations :

S : 10 µg/g

Matrix :

#2 Diesel Fuel

Certified by :



Alketa Mixha, Chemist

Date : February 2, 2005

This solution is intended for use in the determination of total sulfur in #2 Diesel Fuel. The certified value is based upon gravimetric procedures used to prepare the final standard, which are traceable to NIST according to ME Report #2793ME and NIST Test #39760. In order to verify this certified value, the final solution was analyzed by x-ray fluorescence spectroscopy (XRF) against NIST SRM 2724b.

This standard is guaranteed to be accurate to within plus or minus 1% of the concentration shown above, up to the expiry date, provided the solution is kept tightly capped and stored under normal laboratory conditions. We recommend that the solution be thoroughly mixed, by shaking the bottle, immediately prior to use. The Material Safety Data Sheet and this Certificate of Analysis are available on our web site. (Ce certificat est également disponible en français)

Manufactured according to an ISO 9001:2000 Quality System and ISO 17025 (in-process)

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