SCP SCIENCE has manufactured calibration and quality control standards for inorganic analysis since 1990. In addition to the products listed in the following pages, custom multi-element blends are available on request.

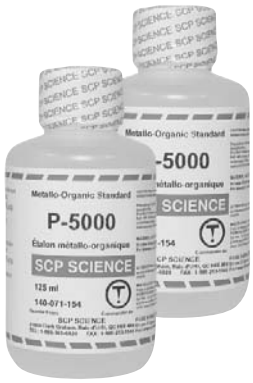
Metallo-Organic Standards - Notes

NOTES

Metallo-Organic Single Element Standards

Metallo-Organic calibration standards are required for metal analysis in organic matrices. “Off the shelf” single element standards as well as multi-element standards are available.

- Single-element standards available
  - For spiking or matrix-matching, if necessary
- 21 element, multi-element standard (SCP-21) available in 7 different concentrations and in 2 sizes
  - Complete choice to reduce dilution errors
- Certificate of Analysis with each standard listing the lot number, the expiry date and the concentration or each element
  - Complete documentation for audit purposes



Single Element	Symbol	Matrix	Code	Catalog Number 1000 µg/g 62.5 ml*	1000 µg/g 250 ml*	5000 µg/g 62.5 ml**
Aluminum	Al	Oil		140-074-132	140-076-138	140-071-132
Arsenic	As	Oil	⊗	140-072-332	---	---
Antimony	Sb	Oil		140-074-512	140-076-518	140-071-512
Barium	Ba	Oil		140-074-552	140-076-001	140-071-562
Beryllium	Be	Oil		140-071-042	140-076-048	---
Boron	B	Oil		140-074-055	---	140-071-055
Calcium	Ca	Oil		140-074-202	140-076-208	140-071-202
Cadmium	Cd	Oil		140-074-482	140-076-002	---
Chromium	Cr	Oil	⊗	140-074-242	140-076-248	140-071-242
Cobalt	Co	Oil		140-074-272	140-076-003	140-071-272
Copper	Cu	Oil	⊗	140-074-292	140-076-004	140-071-292
Iron	Fe	Oil	⊗	140-074-262**	140-076-005**	140-071-262
Lead	Pb	Oil		140-074-822	140-076-828	140-071-822
Lithium	Li	Oil		140-074-032	140-076-038	140-071-032
Magnesium	Mg	Oil		140-074-122	140-076-128	140-071-122
Manganese	Mn	Oil	⊗	140-074-252	140-076-258	140-071-252
Molybdenum	Mo	Oil		140-074-422	---	140-071-422
Nickel	Ni	Oil	⊗	140-074-282	140-076-006	140-071-282
Phosphorus	P	Oil		140-074-152	140-076-158	140-071-152
Potassium	K	Oil		140-074-192	140-076-198	140-071-192
Silicon	Si	Oil		140-074-142	140-076-148	140-071-142
Silver	Ag	Oil		140-074-472	---	140-071-472
Sodium	Na	Oil		140-074-112	140-076-118	140-071-112
Sulfur	S	Oil	⊗	140-074-162	---	140-071-162
Tin	Sn	Oil		140-074-502	140-076-508	140-071-502
Titanium	Ti	Oil	⊗	140-074-222	140-076-228	140-071-222
Vanadium	V	Oil		140-074-232**	140-076-007**	140-071-232
Yttrium	Y	Oil		140-071-390	140-076-398	140-071-392
Zinc	Zn	Oil		140-074-302	140-076-008	140-071-302

* In 20 cSt oil
** In 75 cSt oil

NOTE: *Other elements and concentrations are available on request*

⊗ *Glass Container*
✓ *Dangerous Goods**
Poison
Corrosive
③ *Flammable*
⑤ *Oxidant*

*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

Metallo-Organic Multi-Element Standards

SCP-12 Multi-Element Standard

Concentration (µg/g)	Code	Catalog Number 125 ml	250 ml
10		140-073-011	140-073-012
30		140-073-031	140-073-032
50		140-073-051	140-073-052
100		140-073-101	140-073-102
300		140-073-301	140-073-302
500		140-073-501	140-073-502
900		140-073-901	140-073-902

12 Element Blend Containing: Ag, Al, Cr, Cu, Fe, Mg, Na, Ni, Pb, Si, Sn, Ti

SCP-21 Multi-Element Standard

Concentration (µg/g)	Code	Catalog Number 125 ml	250 ml
10		140-072-011	140-072-012
30		140-072-031	140-072-032
50		140-072-051	140-072-052
100		140-072-101	140-072-102
300		140-072-301	140-072-302
500		140-072-501	140-072-502
900		140-072-901	140-072-902

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

SCP-21+K Multi-Element Standard

Concentration (µg/g)	Code	Catalog Number 125 ml	250 ml
10		140-072-211	140-072-212
30		140-072-231	140-072-232
50		140-072-251	140-072-252
100		140-072-111	140-072-112
300		140-072-311	140-072-312
500		140-072-511	140-072-512
900		140-072-911	140-072-912

22 Element Blend Containing: Ag, Al, B, Ba, Ca, Cd,Cr,Cu, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, Si, Sn, Ti, V, Zn

SCP-23 Multi-Element Standard

Concentration (µg/g)	Code	Catalog Number 125 ml	250 ml
10		140-078-001	140-078-002
30		140-078-003	140-078-004
50		140-078-005	140-078-006
100		140-078-007	---
300		140-078-009	140-078-010
500		140-078-011	140-078-012
900		140-078-013	140-078-014

23 Element Blend Containing: Ag, Al, B, Ba, Ca, Cd,Cr,Cu, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Si, Sn, Ti, V, Zn

Metal Additive Standard

Concentration (µg/g)	Code	Catalog Number 125 ml	250 ml
900		140-074-901	140-074-902
1000		140-074-903	140-074-904
3000		140-074-905	140-074-906
5000		140-074-907	140-074-908

5 Element Blend Containing: Ba, Ca, Mg, P, Zn

Stabilizer* in Mineral Oil

Viscosity	Code	Catalog Number 62.5 ml
75 cSt	⊗	140-070-950

*** Add 0.6% by weight**

Matrix Oil

Viscosity	Code	Catalog Number 500 ml	1 gallon
75 cSt		140-075-001	140-075-002
20 cSt		140-075-003	140-075-004

⊗ *Glass Container* ⑥ *Poison* ③ *Flammable*
✓ *Dangerous Goods** ⑧ *Corrosive* ⑤ *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

Certificate of Analysis

Catalog number	**140-071-272**
Description	**Metallo-Organic Standard Co @ 5000 µg/g**
Lot number	**SC4322893**
Expiration Date	**November 2005**

Concentrations :

Co : 4997 µg/g

Matrix : **75 cSt Hydrocarbon Oil**

Certified by : _____
Alketa Mixha, Chemist

Date : November 18, 2004

This solution is intended for use as a calibration standard for plasma emission spectroscopy (ICP or DCP), rotating disk (rotrode) or atomic absorption spectroscopy (AAS). The certified values are based upon assayed concentrations of the raw materials and the 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 these certified values, the final solution was analyzed by plasma emission spectroscopy (ICP or DCP).

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)

SCP SCIENCE
21800 Clark Graham, Baie D'Urfé, QC, Canada H9X 4B6
Phone : (514) 457-0701 Fax : (514) 457-4499
Web Site: www.scpscience.com

Certificate of Analysis

Catalog number	**140-072-032**
Description	**Metallo-Organic Standard SCP-21 @ 30 µg/g**
Lot number	**SC4345116**
Expiration Date	**December 2005**

Concentrations :

Ag :	**29.9 µg/g**	**Fe :**	**30.0 µg/g**	**Si :**	**30.1 µg/g**
Al :	**29.9 µg/g**	**Mg:**	**29.9 µg/g**	**Sn :**	**29.9 µg/g**
B :	**29.9 µg/g**	**Mn**	**29.9 µg/g**	**Ti :**	**29.9 µg/g**
Ba :	**29.9 µg/g**	**Mo**	**29.9 µg/g**	**V :**	**30.0 µg/g**
Ca :	**31.1 µg/g**	**Na :**	**30.0 µg/g**	**Zn :**	**29.9 µg/g**
Cd :	**29.9 µg/g**	**Ni :**	**29.9 µg/g**		
Cr :	**29.9 µg/g**	**P :**	**29.9 µg/g**		
Cu :	**29.9 µg/g**	**Pb :**	**29.9 µg/g**		

Matrix : **75 cSt Hydrocarbon Oil**

Certified by : _____
Alketa Mixha, Chemist

Date : December 10, 2004

This solution is intended for use as a calibration standard for plasma emission spectroscopy (ICP or DCP), rotating disk (rotrode) or atomic absorption spectroscopy (AAS). The certified values are based upon assayed concentrations of the raw materials and the gravimetric procedures used to prepare the final standard, which is traceable to NIST according to ME Report #2793ME and NIST Test #39760. In order to verify these certified values, the final solution was analyzed by plasma emission spectroscopy (ICP or DCP), and is traceable to NIST SRM 1085b.

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)
SCP SCIENCE
21800 Clark Graham, Baie D'Urfé, QC, Canada H9X 4B6
Phone : (514) 457-0701 Fax : (514) 457-4499
Web Site: www.scpscience.com

Oil Based Standards Request Form

Complete this form to receive a quotation for your specific oil based standard or to enter your purchase order number. Photocopy for use with multiple requests.

Contact Information:

Name: _____

Title: _____

Company: _____

Mailing Address: _____

City: _____ Province/State: _____ PC/Zip: _____ Country: _____

Telephone: _____ Fax: _____

E-mail: _____ Account No: _____

Analyte(s)	Concentration(s) (µg/g)	Matrix	Quantity (Volume)

Application: _____

Fax form back to:

USA	**(800) 253-5549**
Canada / International	**(800) 253-5549 / (514) 457-4499**
Europe	**+33 (0)1 60 92 05 67**