



CALIBRATION STANDARDS/ *Kalibrationsstandards*

ELTRA calibration materials are suitable for the following ELTRA analyzers:

ELTRA Kalibrationsmaterialien sind für folgende ELTRA Analysatoren geeignet:

Calibration material	Name	ON-p 2	OH-p 2	ONH-p 2	H-500
<i>Kalibrationsmaterialien</i>					
91100-1001	Steel pins	✓	✓	✓	
91400-xxxx	Steel pins		✓	✓	
91110	Steel balls				✓
91000-xxx	Copper pins	✓	✓	✓	
91205-xxxx	Titanium pins (100 mg)	✓	✓	✓	
91305-xxxx	Titanium pins (250 mg)		✓	✓	

Calibration material	Name	CS-i	CS-d	C(H)S-r C(H)S 580A	Surface C 800	CW 800	CW 800 M	TGA Thermostep
<i>Kalibrationsmaterialien</i>								
92400-30xx	Steel chips	✓	✓					
92400-30xx	Cast iron	✓	✓					
92400-40xx	Steel chips	✓	✓					
91000-xxxx	Copper pins	✓	✓					
90816-xxxx	Tungsten carbide	✓	✓					
92511-xxxx	Coal		✓	✓				
92550-xxxx	Coal premium		✓	✓				✓
92560-xxxx	Coke premium		✓	✓				✓
90710-xxxx	EDTA		✓	✓			✓	
90700-1040	Calcium oxalate					✓	✓	✓
90810	Calcium carbonate	✓	✓	✓		✓	✓	✓
90821	Barium sulphate	✓	✓					
90824	Sulfanilic acid		✓	✓				
92530	Oil standard		✓	✓				
90860	Glycerine		✓	✓				
90812-xxxx	Limestone	✓	✓	✓		✓	✓	
91900-xxxx	Ore	✓	✓	✓				
90817-xxxx	Soil	✓	✓	✓	✓	✓	✓	

Prices and further products on request | Preise und weitere Materialien auf Anfrage

All calibration standards are always subject to our final confirmation since the values may vary due to new lots.

Alle Kalibrationsstandards müssen von uns endgültig bestätigt werden, da die Werte der Chargen variieren können.



Content *Inhalt*

Calibration Standards

Kalibrationsstandards

O/N/H certified

O/N/H zertifiziert

91100-xxxx	Steel, pins <i>Stahl, Pins</i> (O, N)	5
91400-xxxx	Steel, pins <i>Stahl, Pins</i> (H)	5
91110	Steel, balls <i>Stahl, Kugeln</i> (H)	5
91500-1001	Steel, powder <i>Stahl, Pulver</i> (O,N)	5
91000-xxxx	Copper, pins <i>Kupfer, Pins</i> (O,S)	6
91205-xxxx	Titanium <i>Titan</i> (O,N,H)	6
91305-xxxx	Titanium <i>Titan</i> (H,C)	6

C/S certified for induction furnace

C/S zertifiziert für Induktionsofen

92400-30xx/yyy	Steel, chips <i>Stahlspäne</i>	7
92400-30xx/yyy	Cast Iron, chips <i>Gusseisenspäne</i>	7
92400-40xx/yyy	Steel, chips <i>Stahlspäne</i>	8
92500-xxxx/yyy	Steel, pins <i>Stahl, Pins</i>	8
90816-xxxx	Tungsten carbide <i>Wolframcarbid</i>	8

C/S certified for resistance furnace

C/S zertifiziert für Widerstandsofen

92550-xxxx	Coal premium <i>Kohle Premium</i>	9
92570-xxxx	Pet Coke premium <i>Petrolkoks Premium</i>	9
92511-xxxx	Coal <i>Kohle</i>	9
92560-xxxx	Coke premium <i>Koks Premium</i>	10
92530	Oil standard <i>Öl Standard</i>	10

C/S certified for induction and resistance furnace

C/S zertifiziert für Induktions- und Widerstandsofen

90812-xxxx	Limestone <i>Kalkstein</i>	11
91900-xxxx	Ore <i>Erz</i>	11
90817-xxxx	Soil <i>Boden</i>	11

Other Calibration Materials

Andere Kalibrationsmaterialien

90710-xxxx	EDTA <i>EDTA</i>	12
90710-3030	Sucrose <i>Sacharose</i>	12
90700-1040	Calcium oxalate <i>Calciumoxalat</i>	12
90810	Calcium carbonate <i>Calciumcarbonat</i>	12
90821	Barium sulphate <i>Bariumsulfat</i>	12
90824	Sulfanilic acid <i>Sulfanilsäure</i>	13
90860/yyy	Glycerine <i>Glycerin</i>	13
91900-2001	Zinc Sulfide <i>Zinksulfid</i>	13

Consumables

Verbrauchsmaterialien

88600-xxxx	Wrought Iron (high purity) / <i>Eisenzuschlag (hohe Reinheit)</i>	13
90800	Graphite <i>Graphit</i>	13

O/N/H certified
O/N/H zertifiziert

91100-xxxx Steel, pins *Stahl, Pins* – 100 pins – 1 g each á 1 g

Item number <i>Artikelnummer</i>	Lot	N-Range/ <i>N-Bereich</i>	N ppm	O ppm
91100-1001	819D	20 – 40 ppm N	30	7
91100-1002	1121R	30 – 100 ppm N	69	34
91100-1003	921G	150 – 250 ppm N	228	36
91100-1005	1221S	300 – 600 ppm N	537	31
91100-1007	522L	70 - 130 ppm N	103	90
91100-1010	419K	> 1000 ppm N	1400	31
91100-1011	717D	600-1000 ppm N	756	9

91400-xxxx Steel, pins *Stahl, Pins (H)*– 100 pins – 1 g each á 1 g

Item number <i>Artikelnummer</i>	Lot	H-Range/ <i>H-Bereich</i>	H ppm
91400-1001	917C	0.5 – 1 ppm H	0.95
91400-1002	1021M	1.5 – 4 ppm H	2.50

**91110-Steel, balls *Stahl, Kugeln* – 100 balls, gold plated – 1 g each
*100 Kugeln mit Goldbeschichtung á 1 g***

Item number <i>Artikelnummer</i>	Lot	H ppm
91110	201808	2.50

91500-1001-Steel, powder *Stahl, Pulver* – 50 g

Item number <i>Artikelnummer</i>	Lot	O %	N %
91500-1001	419E	0.91	0.0133

91000-xxxx - Copper, pins *Kupfer, Pins* – 100 pins – 1 g each á 1 g

Item number <i>Artikelnummer</i>	Lot	S ppm	O ppm
91000-1003	921H	13	238
91000-1004	521L	5	3



91205-xxxx - Titanium *Titan* – 100 pins – 0.1 g each á 0.1 g

Item number <i>Artikelnummer</i>	Lot	H-Range/ <i>H-Bereich</i>	H ppm	O ppm	N ppm
91205-1001	1019A	10 – 35 ppm H	16	3610	58
91205-1002	1221V	20 – 70 ppm H	36	1450	143
91205-1003	520X	30 – 90 ppm H	90	1000	60
91205-1004	220G	60 – 120 ppm H	122	1110	39
91205-1005	621T	150 – 250 ppm H	197	1250	65
91205-1006	1218A	120 – 170 ppm H	169	1190	58

91305-xxxx - Titanium *Titan* – 100 pins – 0.25 g each á 0.25 g

Item number <i>Artikelnummer</i>	Lot	H-Range/ <i>H-Bereich</i>	H ppm	C ppm
91305-1001	315D	< 50 ppm H	18	190
91305-1002	618C	50-100 ppm H	68	63
91305-1003	714E	>100 ppm H	137	80

C/S certified for induction furnace

C/S zertifiziert für Induktionsofen

92400-30xx/yyy Steel, chips *Stahlspäne* – 150 g

Item number <i>Artikelnummer</i>	Lot	C-Range/ <i>C-Bereich</i>	S %	C %	N ppm
92400-3030	320L	0.01 – 0.05 %C	0.032	0.022	404
92400-3050	1220P	0.1 – 0.2 %C	0.019	0.168	102
92400-3060	1120N	0.2 – 0.5 %C	0.029	0.455	95
92400-3061	620B	0.2 – 0.5 %C	0.104	0.385	104
92400-3062	719F	0.2 – 0.5 %C	0.025	0.201	71
92400-3070	421G	0.5 – 1.0 %C	0.0010	0.948	44

92400-30xx/yyy Cast Iron, chips & powders *Gusseisenspäne/pulver* – 150 g

Item number <i>Artikelnummer</i>	Lot	C-Range/ <i>C-Bereich</i>	S %	C %
92400-3090 ^{#1}	1018D	2.0 – 3.0 %C	0.0172	2.01
92400-3091 ^{#1}	90701	3.0 – 5.0 %C	0.012	2.79
92400-3100 ^{#1}	120B	3.0 – 5.0 %C	0.0215	4.22
92400-3101 ^{#1}	620C	3.0 – 5.0 %C	0.0203	3.31
92400-3102 ^{#2}	220H	3.0 – 5.0 %C	0.108	3.08

#1 = powdered samples / Pulver

#2 = chip samples / Späne oder Granulat

92400-40xx/yyy Steel, chips *Stahlspäne* – 150 g

Item number <i>Artikelnummer</i>	Lot	S-Range/ <i>S-Bereich</i>	S %	C %	N ppm
92400-4005	817D	ca. 0.05% S	0.079	0.492	93
92400-4010	421k	ca. 0.1 % S	0.096	0.157	77
92400-4020	320P	ca. 0.3 % S	0.261	0.430	69

92500-xxxx/yyy Steel, pins *Stahl, Pins* – 454 g

Item number <i>Artikelnummer</i>	Lot	S-Range/ <i>S-Bereich</i>	S %	C %
92500-1001	216B	ca. 0.2 % C	0.0195	0.192
92500-1002	420U	ca. 0.4 % C	0.0121	0.472
92500-1003	520Z	ca. 0.8 % C	0.0055	0.820
92500-2001	217A	ca. 0.2 %S	0.230	0.131

90816-xxxx – Tungsten Carbide *Wolframcarbid* – 100 g

Item number <i>Artikelnummer</i>	Lot	C %	S %
90816-3001	518C	6.17	0.0050

C/S certified for resistance furnace C/S zertifiziert für Widerstandsofen

92550-xxxx-Coal premium *Kohle Premium* – 50 g

Item number <i>Artikelnummer</i>	Lot	S-Range/ <i>S-Bereich</i>	S %	C %	H %	Ash %	Volatile %
92550-3010	778622	< 1.0 %S	0.81	68.21	2.70	21.23	16.09
92550-3020	776121	<= 1.0 %S	0.81	68.88	2.76	21.02	15.76
92550-3040	781918	1.0 - 3.0 %S	2.27	45.14	3.39	42.89	26.30
92550-3060	782522	> 3.0 %S	4.96	61.81	3.91	24.63	21.65

92570-xxxx-Pet Coke premium *Kohle Premium* – 50 g

Item number <i>Artikelnummer</i>	Lot	S-Range/ <i>S-Bereich</i>	S %	C %	H %	Ash %	Volatile %
92570-3020	745418	< 1.0 %S	0.49	95.92	1.91	0.09	5.79
92570-3040	561117	ca. 5.0 %S	5.00	87.89	1.89	0.6	6.85

92511-xxxx-Coal *Kohle* – 50 g

Item number <i>Artikelnummer</i>	Lot	S-Range/ <i>S-Bereich</i>	S %
92511-3005	682217	< 0.1%S	0.022
92511-3010	700421	0.1 - 0.5 %S	0.35
92511-3020	702819	0.5 - 1.0 %S	0.76
92511-3030	051020	1.0 - 1.5 %S	1.46
92511-3040	706818	1.5 - 2.0 %S	2.04
92511-3050	707617	2.0 - 3.0 %S	2.63
92511-3060	709618	3.0 - 4.0 %S	3.54
92511-3070	710621	4.0 - 5.0 %S	4.25
92511-3080	712318	> 5.0 %S	5.79



92560-xxxx-Coke premium *Koks Premium* – 50 g

Item number <i>Artikelnummer</i>	Lot	S-Range/ S-Bereich	S %	C %	H %	Volatile %
92560-3010	772920	< 1.0 %S	0.80	88.39	0.15	1.00

92530 – Oil Standard *Öl Standard* – 100 ml

Item number <i>Artikelnummer</i>	Lot	S %
92530	047420	0.98

C/S certified for induction and resistance furnace

C/S zertifiziert für Induktions- und Widerstandsofen

90812-xxxx – Limestone *Kalkstein* – 25 g

Item number <i>Artikelnummer</i>	Lot	S %	C %	S as SO ₃ (%) = 2.5 x S ^{#1}
90812-3001	918D	0.031	11.97	0.0775
90812-3002	920G	0.40	11.59	1
90812-3003	422H	0.024	3.01	0.06
90812-3004	519E	0.052	7.15	0.13

#1 = Informative value for customer which require the total sulfur content as SO₃ content (not certified)
#1 = Informativer Wert für Kunden, welche den vorhandenen Schwefelwert als SO₃ Wert benötigen (kein zertifizierter Wert)

91900-xxxx – Ore *Erz* – 30 g

Item number <i>Artikelnummer</i>	Lot	S-Range/ <i>S-Bereich</i>	C %	S %
91900-1001	321E	ca. 1.4 %S	1.43	1.45
91900-1002	119B	ca. 4.0 %S	4.35	4.01
91900-1003	721X	ca. 3.0 %S	7.58	3.27

90817-xxxx – Soil *Boden* – 25 g

Item number <i>Artikelnummer</i>	Lot	C %	S %
90817-3001	320Q	2.05	2.05
90817-3002	420R	0.49	0.48
90817-3003	619H	1.18	1.03
90817-3004	516A	1.17	0.13

Other Calibration Materials Andere Kalibrationsmaterialien

90710-xxxx - EDTA *EDTA* – 50 g

Item number <i>Artikelnummer</i>	Lot	C %	H %
90710-3010	520A	41.10	5.52

90710-3030 – Sucrose *Sacharose* – 50 g

Item number <i>Artikelnummer</i>	Lot	C %	H %	O %
90710-3030	721W	42.11	6.48	51.41

90700-1040 – Calcium oxalate *Calciumoxalat* – 50 g

Item number <i>Artikelnummer</i>	Lot	Weight loss %	°C
90700-1040	520Y	12.21 as H₂O	200
90700-1040	520Y	18.97 as CO	450
90700-1040	520Y	29.82 as CO₂	850

90810 – Calcium carbonate *Calciumcarbonat* – 100 g

Item number <i>Artikelnummer</i>	Lot	C %
90810	C255416	12

90821 – Barium sulphate *Bariumsulfat* – 50 g

Item number <i>Artikelnummer</i>	Lot	S %
90821	/	13.70

90824 – Sulfanilic acid / Sulfanilsäure – 50 g

Item number <i>Artikelnummer</i>	Lot	C %	H %	S %
90824	/	41.57	4.04	18.48

90860/yyy – Glycerine *Glycerin* – 100 ml

Item number <i>Artikelnummer</i>	Lot	C %	H %
90860	/	40.5	8.7

91900-2001 - Zinc Sulfide *Zinksulfid* – 50 g

Item number <i>Artikelnummer</i>	Lot	C %	H %	S %
91900-2001	P19F032			32.90

Consumables

Verbrauchsmaterialien

88600-xxxx – Wrought Iron (high purity) *Eisenzuschlag (hohe Reinheit)* – 454 g

Item number <i>Artikelnummer</i>	Lot	C-Range/ <i>C-Bereich</i>	C %	S %
88600-0013	120F	< 0.001 %C	0.0006	0.0016

90800 – Graphite *Graphit* – 50 g

Item number <i>Artikelnummer</i>	Lot	C %
90800	/	100