



CALIBRATION STANDARDS/ *Kalibrationsstandards*

ELTRA calibration materials are suitable for the following ELTRA analyzers:
ELTRA Kalibrationsmaterialien sind für folgende ELTRA Analytoren 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	1023F	20 – 40 ppm N	25	6
91100-1002	240208	30 – 100 ppm N	56	53
91100-1003	1023Y	150 – 250 ppm N	222	33
91100-1004	823G	100 – 500 ppm N	319	30
91100-1005	1221S	300 – 600 ppm N	537	31
91100-1007	1023D	70 - 130 ppm N	102	110
91100-1010	1022P	> 1000 ppm N	1550	33
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	922K	0.5 – 1 ppm H	0.70
91400-1002	923Q	1.5 – 4 ppm H	2.0
91400-1003	923t	>4 ppm H	12

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	O ppm
91000-1001	518B	493
91000-1002	1123J	286
91000-1003	322F	251
91000-1004	523T	7



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	123C	10 – 35 ppm H	16	3890	76
91205-1002	240110	20 – 70 ppm H	36	1420	150
91205-1003	240320	30 – 90 ppm H	80	900	76
91205-1004	623X	60 – 120 ppm H	117	1048	40
91205-1005	1023C	150 – 250 ppm H	182	1140	57
91205-1006	240205	120 – 170 ppm H	165	1189	56

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	121B	>100 ppm H	149	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
92400-3020	423N	< 0.01 %C	0.0083	0.0043	46
92400-3030	240123	0.01 – 0.05 %C	0.029	0.015	384
92400-3050	123D	0.1 – 0.2 %C	0.022	0.167	100
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	823H	0.5 – 1.0 %C	(0.0006)	0.897	48

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}	723D	2.0 – 3.0 %C	0.018	2.05
92400-3091 ^{#1}	123B	3.0 – 5.0 %C	0.018	2.77
92400-3100 ^{#1}	422F	3.0 – 5.0 %C	0.022	4.22
92400-3101 ^{#1}	422G	3.0 – 5.0 %C	0.021	3.88
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	623A	ca. 0.1 % S	0.108	0.175	113
92400-4020	423K	ca. 0.3 % S	0.274	0.455	61

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	622P	ca. 0.2 % C	0.018	0.215
92500-1002	1123G	ca. 0.4 % C	0.012	0.483
92500-1003	240207	ca. 0.8 % C	0.0051	0.817
92500-2001	722D	ca. 0.2 %S	0.228	0.131

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

Item number <i>Artikelnummer</i>	Lot	C %	S %
90816-3001	622V	6.14	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	776723	<= 1.0 %S	1.11	72.4	4.52	9.31	35.50
92550-3040	240322	1.0 - 3.0 %S	2.40	73.07	4.77	8.17	36.69
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	745622	< 1.0 %S	0.55	94.97	1.87	0.07	6.11
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	700523	0.1 - 0.5 %S	0.34
92511-3020	240716	0.5 - 1.0 %S	0.74
92511-3030	705922	1.0 - 1.5 %S	1.46
92511-3040	706523	1.5 - 2.0 %S	2.03
92511-3050	071222	2.0 - 3.0 %S	2.51
92511-3060	709722	3.0 - 4.0 %S	3.41
92511-3070	710621	4.0 - 5.0 %S	4.25
92511-3080	712321	> 5.0 %S	5.83



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

Item number <i>Artikelnummer</i>	Lot	S-Range/ S-Bereich	S %	C %	H %	Volatile %
92560-3010	721223	< 1.0 %S	0.77	87.74	(0.24)	(0.54)

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	622Q	0.033	12.02	0.08
90812-3002	920G	0.40	11.59	1
90812-3003	422H	0.024	3.01	0.06
90812-3004	240606	0.0516	7.18	0.129

#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	821B	ca. 4.0 %S	4.08	3.95
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	823L	2.14	1.94
90817-3002	922H	0.13	0.13
90817-3003	323H	1.11	1.04
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 %	N %	O %
90710-3010	1122V	41.07	5.52	9.55	43.71

90710-3030 – Sucrose *Sacharose* - 50 g

Item number <i>Artikelnummer</i>	Lot	C %	H %	O %
90710-3030	240304	42.11	6.48	51.41

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

Item number <i>Artikelnummer</i>	Lot	Weight loss %	°C
90700-1040	522M	12.21 as H₂O	200
90700-1040	522M	18.97 as CO	450
90700-1040	522M	29.82 as CO₂	850

90810 – Calcium carbonate *Calciumcarbonat* - 100 g

Item number <i>Artikelnummer</i>	Lot	C %
90810	22040027	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	223F			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	223E	< 0.001 %C	0.0004	0.0011

90800 – Graphite *Graphit* – 50 g

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