



## **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.*

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### 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
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#### C/S certified for induction furnace

##### *C/S zertifiziert für Induktionsofen*

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## C/S certified for resistance furnace

### C/S zertifiziert für Widerstandsofen

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92570-xxxx	Pet Coke premium <i>Petrolkoks Premium</i>	9
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## C/S certified for induction and resistance furnace

### C/S zertifiziert für Induktions- und Widerstandsofen

90812-xxxx	Limestone <i>Kalkstein</i>	11
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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	922L	<b>20 – 40 ppm N</b>	24	7
91100-1002	1121R	<b>30 – 100 ppm N</b>	69	34
91100-1003	921G	<b>150 – 250 ppm N</b>	228	36
91100-1005	1221S	<b>300 – 600 ppm N</b>	537	31
91100-1007	522L	<b>70 - 130 ppm N</b>	103	90
91100-1010	1022P	<b>&gt; 1000 ppm N</b>	1550	33
91100-1011	717D	<b>600-1000 ppm N</b>	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	<b>0.5 – 1 ppm H</b>	0.95
91400-1002	1021M	<b>1.5 – 4 ppm H</b>	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	<b>10 – 35 ppm H</b>	16	3610	58
91205-1002	1221V	<b>20 – 70 ppm H</b>	36	1450	143
91205-1003	520X	<b>30 – 90 ppm H</b>	90	1000	60
91205-1004	220G	<b>60 – 120 ppm H</b>	122	1110	39
91205-1005	621T	<b>150 – 250 ppm H</b>	197	1250	65
91205-1006	1218A	<b>120 – 170 ppm H</b>	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	<b>&lt; 50 ppm H</b>	18	190
91305-1002	618C	<b>50-100 ppm H</b>	68	63
91305-1003	121B	<b>&gt;100 ppm H</b>	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
92400-3030	320L	<b>0.01 – 0.05 %C</b>	0.032	0.022	404
92400-3050	1220P	<b>0.1 - 0.2 %C</b>	0.019	0.168	102
92400-3060	1120N	<b>0.2 - 0.5 %C</b>	0.029	0.455	95
92400-3061	620B	<b>0.2 - 0.5 %C</b>	0.104	0.385	104
92400-3062	719F	<b>0.2 - 0.5 %C</b>	0.025	0.201	71
92400-3070	421G	<b>0.5 – 1.0 %C</b>	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 <sup>#1</sup>	1018D	<b>2.0 - 3.0 %C</b>	0.0172	2.01
92400-3091 <sup>#1</sup>	90701	<b>3.0 - 5.0 %C</b>	0.012	2.79
92400-3100 <sup>#1</sup>	120B	<b>3.0 - 5.0 %C</b>	0.0215	4.22
92400-3101 <sup>#1</sup>	620C	<b>3.0 - 5.0 %C</b>	0.0203	3.31
92400-3102 <sup>#2</sup>	220H	<b>3.0 - 5.0 %C</b>	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	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	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	071222	2.0 - 3.0 %S	2.51
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 <sub>3</sub> (%) = 2.5 x S <sup>#1</sup>
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	519E	0.052	7.15	0.13

#1 = Informative value for customer which require the total sulfur content as SO<sub>3</sub> content (not certified)  
#1 = Informativer Wert für Kunden, welche den vorhandenen Schwefelwert als SO<sub>3</sub> 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	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	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	<b>12.21 as H<sub>2</sub>O</b>	200
90700-1040	520Y	<b>18.97 as CO</b>	450
90700-1040	520Y	<b>29.82 as CO<sub>2</sub></b>	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