

## Focus on prepacked tubes: IRMS analysis

At Elemental Microanalysis we are experts in packing tubes for analysers.

We have a specialist department with over forty years of experience using our own ISO 9001 manufactured reagents.

Elemental Microanalysis Quality

ISO 9001 | ISO 17025 | ISO 17034



We understand the importance of precision, eliminating variables, laboratory staff time and minimal exposure to hazardous materials.

- Less downtime for your instrument
- No more measuring or handling of chemicals
- No waste
- High quality reagents
- 0.5mm inner diameter prepacked GC tubes supplied

Prepacked tubes are packaged appropriately to optimise reagent life-time.

Let us share our expertise and do the hard work for you. The prepacked tubes we have available for Isotope Ratio Mass Spectrometry (IRMS) are detailed here.




	Corrosive
	Health hazard
	Serious health hazard
	Hazardous to the environment

### Prepacked tubes for Elemental® analysers

#### Prepacked GC Reaction Tube X1504

Suitable for:

- Elemental® and GVI® (GC Combustion/pyrolysis)

Key	Product	Qty	EMAL part no.
<b>X1504</b>	<b>Prepacked GC Reaction Tube</b> Length 650mm OD 6mm	<b>1</b>	<b>X1504</b>
1	Furnace reaction tube quartz	1	C1115
2	Isotope catalyst 	150mm	B1149
3	Silver wool very fine	10mm	B1119

X1504 Prepacked GC Reaction Tube

## Prepacked tubes for Elementar® analysers



Prepacked N/NC/CHN Reduction Tube X2500



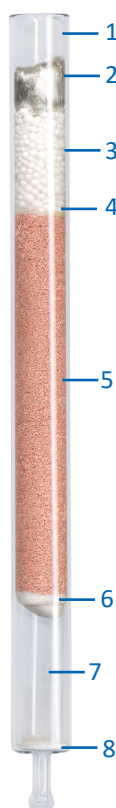
### Prepacked N/NC/CHN reduction tube X2500

Suitable for:

- Elementar vario EL (EA IRMS)
- Elementar vario ISOTOPE cube / ISOTOPE select (EA IRMS)

Key	Product	Qty	Elementar® no.	EMAL part no.
<b>X2500</b>	<b>Prepacked N/NC/CHN reduction tube</b>	<b>1</b>		<b>X2500</b>
1	Combustion/reduction tube	1	11.00-1150/4	C3009
2	Silver (fine wire) wool	20mm	22 131 365	B1231
3	Copper fine wires reduced	 295mm	05 000 699	B1015M
4	Quartz wool, very fine	 5mm	03 679 908	B1208






Prepacked CNS/CHNS Reduction Tube X2501



### Prepacked CNS/CHNS reduction tube X2501

Suitable for:

- Elementar vario EL (EA IRMS)
- Elementar vario ISOTOPE cube / ISOTOPE select (EA IRMS)

Key	Product	Qty	Elementar® no.	EMAL part no.
<b>X2501</b>	<b>Prepacked CNS/CHNS reduction tube</b>	<b>1</b>		<b>X2501</b>
1	Combustion/reduction tube	1	11.00-1150/4	C3009
2	Silver wool very fine wire	25mm	22 131 365	B1231
3	Alumina Spheres	 43mm	50 008 467	B1090
4	Quartz Wool Very Fine	 2mm	03 679 908	B1208
5	Copper Wires Fine Wires Reduced	 170mm	05 000 699	B1015M
6	Quartz Wool Very Fine	 10mm	03 679 908	B1208
7	Support tube 65mm	65mm	11.00-1172/4	C3017
8	Quartz Wool Very Fine	 5mm	03 679 908	B1208

## Prepacked tubes for Elementar® analysers

### Prepacked CNS/CHNS Reaction Tube X2502

Suitable for:

- Elementar vario EL (EA IRMS)
- Elementar vario ISOTOPE cube / ISOTOPE select (EA IRMS)

Prepacked CNS/CHNS Reaction Tube X2502



Key	Product	Qty	Elementar® no.	EMAL part no.
<b>X2502</b>	<b>Prepacked CNS/CHNS reduction tube</b>	<b>1</b>		<b>X2502</b>
1	Combustion/reduction tube	1	11.00-1150/4	C3009
2	Alumina Wool Fine	5mm	05 000 086	B1089
3	Tungsten (VI) Oxide Granular	53mm	11.02-0008	B1217
4	Quartz Wool Very Fine	10mm	03 679 908	B1208
5	Support tube 65mm	65mm	11.00-1172/4	C3017
6	Quartz Wool Very Fine	15mm	03 679 908	B1208

### Prepacked reaction tube X2506

Suitable for:

- Elementar vario EL (EA IRMS)
- Elementar vario ISOTOPE cube / ISOTOPE select (EA IRMS)
- Elementar vario MICRO cube (EA IRMS)

Prepacked N/NC/CHN reaction tube X2506



Key	Product	Qty	Europa® no.	EMAL part no.
<b>X2506</b>	<b>Prepacked reduction tube</b>	<b>1</b>		<b>X2506</b>
1	Combustion/reduction tube	1	11.00-1150/4	C3009
2	Alumina Wool Fine	7mm	05 000 086	B1089
3	Copper Oxide Wires Fine Wires	63mm	05 001 039	B1122
4	Quartz Wool Very Fine	5mm	03 679 908	B1208
5	Silver wool very fine wire	50mm	22 131 365	B1231
6	Silica (Quartz) Chips Granular	18mm	03 679 907	B1214

## Prepacked tubes for Europa® and Sercon® analysers

### Prepacked reaction tube Europa® X1200 and X1201

Suitable for:

- Sercon® GSL/Integra (CN-IRMS, S-IRMS, CNS-IRMS)
- Europa® Roboprep/ANCA/Integra (CN-IRMS, S-IRMS, CNS-IRMS)

Key	Product	Qty	Europa® no.	EMAL part no.
<b>X1200</b>	<b>Prepacked reaction tube</b>	<b>1</b>		<b>X1200</b>
<b>X1201</b>	<b>Prepacked reaction tube, heavy wall*</b>	<b>1</b>		<b>X1201</b>
1 (For X1200)	Reaction tube	1	C1001012	C1040
1 (For X1201)	Reaction tube, transparent, heavy wall	1		C1039
2	Sleeve insert	1	C1001048	C1050
3	Quartz wool, very fine	5mm	C1001016	B1208
4	Chromium oxide	110mm	C1001004	B1004
5	Copper oxide fine wires	40mm	C1001007	B1002
6	Silver wool, very fine	20mm	C1001018	B1119

Prepacked Reaction Tube Europa X1200 and X1201



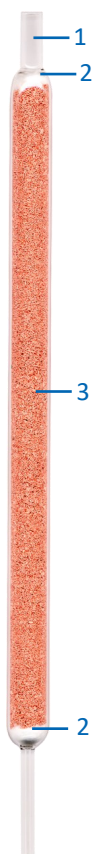
### Prepacked reduction tube Roboprep X1202

Suitable for:

- Sercon® GSL/Integra (CN-IRMS, S-IRMS, CNS-IRMS)
- Europa® Roboprep/ANCA/Integra (N-IRMS, S-IRMS, CNS-IRMS)

Key	Product	Qty	Europa® no.	EMAL part no.
<b>X1202</b>	<b>Prepacked reduction tube Roboprep</b>	<b>1</b>		<b>X1202</b>
1	Reduction tube	1	C1001014	C1030
2	Quartz wool	10mm	C1001016	B1208
3	Copper wires	290mm	C1001006	B1015

X1202 Prepacked Reduction Tube Roboprep






## Prepacked tubes for Europa<sup>®</sup> and Sercon<sup>®</sup> analysers

### Prepacked reduction tube Europa<sup>®</sup> X1203 and X1204

Suitable for:

- Sercon<sup>®</sup> GSL/Integra (CN-IRMS)
- Europa<sup>®</sup> Roboprep/ANCA/Integra (CN-IRMS)

Key	Product	Qty	Europa <sup>®</sup> no.	EMAL part no.
<b>X1203</b>	<b>Prepacked reduction tube</b>	<b>1</b>		<b>X1203</b>
<b>X1204</b>	<b>Prepacked reduction tube, heavy wall*</b>	<b>1</b>		<b>X1204</b>
1 (For X1203)	Reaction tube	1	C1001012	C1040
1 (For X1204)	Reaction tube, heavy wall	1		C1039
2	Quartz chips 	100mm	C1001017	B1008
3	Copper wires 	320mm	C1001006	B1015
4	Quartz wool 	5mm	C1001016	B1208




\*Heavy wall prepacked reaction tubes X1201 and X1204.

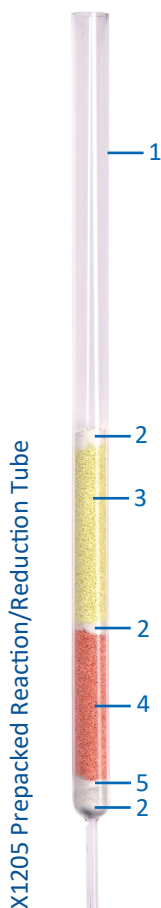
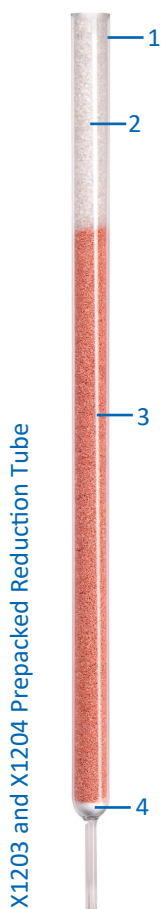
Heavy walled transparent tubes are manufactured using a higher quality, longer lasting material as a replacement for translucent silica.\*

### Prepacked reaction/reduction tube X1205

Suitable for:

- Sercon<sup>®</sup> GSL/Integra (S-IRMS)
- Europa<sup>®</sup> Roboprep/ANCA/Integra (S-IRMS)

Key	Product	Qty	Europa <sup>®</sup> no.	EMAL part no.
<b>X1205</b>	<b>Prepacked reaction/reduction tube</b>	<b>1</b>		<b>X1205</b>
1	Reduction tube	1	C1001012	C1040
2	Quartz wool, very fine 	5mm	C1001016	B1208
3	Tungstic oxide/zirconium oxide	90mm		B1082
4	Copper wires, high purity 	80mm	C1001042	B1035
5	Quartz chips 	10mm	C1001017	B1008





## Prepacked tubes for Europa<sup>®</sup> and Sercon<sup>®</sup> analysers

### Prepacked oxygen pyrolysis tube X1207

Suitable for:

- Sercon<sup>®</sup> GSL/Integra (O pyrolysis and reduction)
- Europa<sup>®</sup> Roboprep/ANCA/Integra (O pyrolysis and reduction)


Key	Product	Qty	Europa <sup>®</sup> no.	EMAL part no.
<b>X1207</b>	<b>Prepacked oxygen pyrolysis tube</b>	<b>1</b>		<b>X1207</b>
1	Reduction tube	1	C1001012	C1040
2	Nickelised carbon 50% Ni 	10mm		B1182
3	Glassy carbon chips 2-3mm	180mm	C1001071	C7003
4	Quartz wool, very fine 	5mm	C1001016	B1208

X1207 Prepacked Oxygen Pyrolysis Tube

### Prepacked hydrogen pyrolysis tube X1209

Suitable for:

- Sercon<sup>®</sup> GSL/Integra (H pyrolysis and reduction)
- Europa<sup>®</sup> Roboprep/ANCA/Integra (H pyrolysis and reduction)

Key	Product	Qty	Europa <sup>®</sup> no.	EMAL part no.
<b>X1209</b>	<b>Prepacked oxygen pyrolysis tube</b>	<b>1</b>		<b>X1209</b>
1	Reduction tube	1	C1001012	C1040
2	Glassy carbon chips 2-3mm	180mm	C1001071	C7003
3	Quartz wool, very fine 	5mm	C1001016	B1208


X1209 Packed Hydrogen Pyrolysis Tube


## Prepacked tubes for Europa<sup>®</sup> and Sercon analysers

### Prepacked GC reaction tubes, ceramic

Product	Qty	EMAL part
<b>Prepacked GC reduction tube ceramic</b> Length 400mm OD 1.6mm	<b>1</b>	<b>X1501</b>
Furnace reaction tube ceramic	1	C1112
Copper wire 0.125mm diameter	15 x 350mm lengths	D9101

Product	Qty	EMAL part
<b>Prepacked GC oxidation tube ceramic</b> Length 400mm OD 1.6mm	<b>1</b>	<b>X1502</b>
Furnace reaction tube ceramic	1	C1112
Copper wire 0.125mm diameter	10 x 350mm lengths	D9101
Platinum wire 0.125mm diameter	1 x 350mm length	D9100

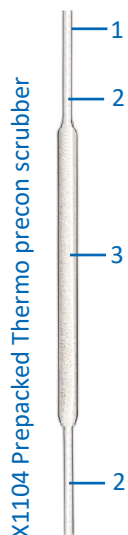
Product	Qty	EMAL part
<b>Prepacked GC Reaction Tube Ceramic</b> Length 400mm OD 1.6mm	<b>1</b>	<b>X1503</b>
Furnace reaction tube ceramic	1	C1112
Nickel Wire 0.125mm Diameter 	14 x 350mm lengths	D9102

Product	Qty	EMAL part no.
<b>Prepacked GC oxidation tube ceramic</b> Length 400mm OD 1.6mm	<b>1</b>	<b>X1507</b>
Furnace reaction tube ceramic	1	C1112
Copper wire 0.125mm diameter	1 X 300mm length	D9101
Platinum wire 0.125	1 X 300mm length	D9100
Nickel wire 0.125mm diameter 	1 X 300mm length	D9102

X1501, X1502, X1503, X1507 Prepacked GC reduction / oxidation tube ceramic


## Pre packed tubes for Thermo® analysers

### X1104 Prepacked Thermo precon scrubber X1104

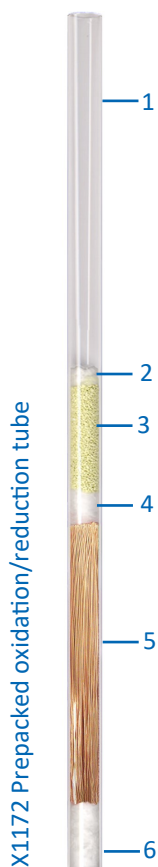


Suitable for:

- Thermo® TC/EA (High Temperature)





Key	Product	Qty	Thermo® part no	EMAL part no.
<b>X1104</b>	<b>Prepacked Thermo precon scrubber</b>	<b>1</b>		<b>X1104</b>
1	Thermo precon scrubber	1		C1104
2	Silica (Quartz) Wool Very Fine 	60mm	33822200	B1017
3	Magnesium Perchlorate 0.7-1.2mm granules	160mm		B1101

### Prepacked oxidation reduction tube X1172



Suitable for:

- Thermo® Flash 2000 IRMS/Flash HT/HT plus (CN-IRMS, S-IRMS, CNS-IRMS)

Key	Product	Qty	Thermo® part no	EMAL part no.
<b>X1172</b>	<b>Prepacked ox/red tube</b>	<b>1</b>	<b>46802021</b>	<b>X1172</b>
1	Reaction tube transparent silica	1	46820065/46820070	C1069
2	Quartz wool discs 15mm 	10mm (2 discs)	338 22210	B1250
3	Tungstic oxide	60mm	33824600	B1025
4	Quartz wool discs 15mm 	20mm (5 discs)	338 22210	B1250
5	Electrolytic copper 	130mm		B1241
6	Quartz wool discs 15mm 	30mm (6 discs)	338 22210	B1250




## Pre packed tubes for Thermo® analysers

### Prepacked TC/EA tube X7020

Suitable for:


- Thermo® TC/EA (High Temperature)

Product	Qty	Thermo® part no.	EMAL part no.
<b>Prepacked TC/EA tube</b> Length 470mm OD 17mm	<b>1</b>	<b>1127500</b>	<b>X7020</b>
Ceramic tube for TC/EA	1	1121320	C1101
Glassy carbon chips	15mm	1117400	C7002
Silica wool very fine 	20mm	33822200	B1017
Silver wool very fine	5mm		B1119
Glassy carbon tube	1	1121310	C7001
Graphite crucible for TC/EA	1	1117332	C7012
Glassy carbon chips	125mm	1117400	C7002

### Prepacked reactor Flash HT X7021

Suitable for:

- Thermo® Flash HT/HT plus (High Temperature)


Product	Qty	Thermo® part no.	EMAL part no.
<b>Prepacked reactor Flash HT</b> Length 450mm OD 17mm	<b>1</b>		<b>X7021</b>
Flash 2000 HT ceramic outer tube	1		C1105
Glassy carbon chips	15mm	1117400	C7002
Silica wool very fine 	15mm	33822200	B1017
Silver wool very fine	5mm		B1119
Glassy carbon tube	1	1121310	C7001
Graphite crucible for TC/EA	1	1117332	C7012
Glassy carbon chips	110mm	1117400	C7002

X7020 Prepacked TC/EA tube

X7021 Prepacked reactor Flash HT


## Prepacked tubes for Thermo® analysers

### Prepacked GC reaction tubes, ceramic

Product	Qty	Thermo® part no.	EMAL part no.
<b>Prepacked GC oxidation reactor</b> Length 320mm OD 1.5mm	<b>1</b>	<b>1040920</b>	<b>X1505</b>
Furnace reaction tube ceramic	1		C1113
Copper wire 0.125mm diameter	1 x 240mm length		D9101
Platinum wire 0.125mm diameter	1 x 240mm length		D9100
Nickel wire 0.125mm diameter 	1 x 240mm length		D9102

Product	Qty	Thermo® part no.	EMAL part no.
<b>Prepacked GC reduction reactor tube</b> Length 320mm OD 1.5mm	<b>1</b>	<b>1040820</b>	<b>X1506</b>
Furnace reaction tube ceramic	1		C1113
Copper wire 0.125mm diameter	3 x 240mm lengths		D9101

Product	Qty	EMAL part no.
<b>Prepacked GC reaction tube ceramic</b> Length 400mm OD 1.6mm	<b>1</b>	<b>X1501</b>
Furnace reaction tube ceramic	1	C1112
Copper wire 0.125mm diameter	15 x 350mm lengths	D9101

Product	Qty	EMAL part no.
<b>Prepacked GC reaction tube ceramic</b> Length 400mm OD 1.6mm	<b>1</b>	<b>X1507</b>
Furnace reaction tube ceramic	1	C1112
Copper wire 0.125mm diameter	1 X 300mm length	D9101
Platinum wire 0.125mm diameter	1 X 300mm length	D9100
Nickel wire 0.125mm diameter 	1 X 300mm length	D9102

Product	Qty	EMAL part no.
<b>Prepacked GC reaction tube ceramic</b> Length 600mm OD 3mm	<b>1</b>	<b>X1500</b>
GC/IRMS furnace reaction tube ceramic	1	C1111
Copper wire 0.125mm diameter	2 x 450mm lengths	D9101
Platinum wire 0.125mm diameter	1 x 450mm length	D9100

X1504 Prepacked GC Reaction Tube (see p1 for key)

X1500 Prepacked GC reaction tube ceramic

X1501 and X1507 Prepacked GC reaction tube ceramic

X1505 Prepacked GC oxidation reactor and X1506 Prepacked GC reduction reactor

## IRMS analysis prepacked tube summary

OEM	Analyser	IRMS Technique	Length mm	OD mm	OEM part no.	EMAL part no.
Elementar/GVI®		GC Combustion/pyrolysis	650	6.0		X1504
Elementar®	vario EL/vario ISOTOPE cube/select	EA IRMS	369	28.0		X2500
Elementar®	vario EL/vario ISOTOPE cube/select	EA IRMS	369	28.0		X2501
Elementar®	vario EL/vario ISOTOPE cube/select	EA IRMS	369	28.0		X2502
Elementar®	vario EL/vario ISOTOPE cube/select/ vario MICRO cube	EA IRMS	369	28.0		X2506
Europa/Sercon®	Roboprep/ANCA/Integra /GSL	CN-IRMS, S-IRMS, CNS-IRMS	475	19.5	SC2147	X1200
Europa/Sercon®	Roboprep/ANCA/Integra /GSL	CN-IRMS, S-IRMS, CNS-IRMS	475	20.0	SC2149	X1201
Europa/Sercon®	Roboprep/ANCA/Integra /GSL	CN-IRMS, S-IRMS, CNS-IRMS	385	10.0	SC1250	X1202
Europa/Sercon®	Roboprep/ANCA/Integra /GSL	CN-IRMS, S-IRMS, CNS-IRMS	475	19.5	SC2151	X1203
Europa/Sercon®	Roboprep/ANCA/Integra /GSL	CN-IRMS, S-IRMS, CNS-IRMS	475	20.0	SC2152	X1204
Europa/Sercon®	Roboprep/ANCA/Integra /GSL	CN-IRMS, S-IRMS, CNS-IRMS	475	19.5	SC2153	X1205
Europa/Sercon®	Roboprep/ANCA/Integra /GSL	O/H pyrolysis and reduction	475	19.5	SC2155	X1207
Europa/Sercon®	Roboprep/ANCA/Integra /GSL	O/H pyrolysis and reduction	475	19.5	SC5157	X1209
Europa/Sercon®	Orchid	GC Combustion/pyrolysis	400	1.6	SC2177	X1501
Europa/Sercon®	Orchid	GC Combustion/pyrolysis	400	1.6	SC2178	X1502
Europa/Sercon®	Orchid	GC Combustion/pyrolysis	400	1.6	SC2179	X1503
Europa/Sercon®	Orchid	GC Combustion/pyrolysis	400	1.6		X1507
Thermo®	Flash 2000 IRMS/Flash HT/HT plus	CN-IRMS, S-IRMS, CNS-IRMS	450	18.0	46802021	X1172
Thermo®	Flash HT/HT plus	High Temperature	450	17.0		X7021
Thermo®	TC/EA	High Temperature	280	12.0		X1104
Thermo®	TC/EA	High Temperature	470	17.0	1127500	X7020
Thermo®		GC Combustion/pyrolysis	600	3.0		X1500
Thermo®		GC Combustion/pyrolysis	320	1.5	1040920	X1505
Thermo®		GC Combustion/pyrolysis	320	1.5	1040820	X1506
Thermo®		GC Combustion/pyrolysis	400	1.6		X1507

Visit our website for a complete range of compatible products for your analyser.

Our new IRMS supplement is available to download from the website.

Available to order from our ISO 9001 factory online, by email, telephone or fax.

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