

Consumables for Elemental Analysis



Fisons Instruments, a world-wide leader in analytical instrumentation, has been supplying organic elemental analyzers for over 25 years. Recognized for precision and reliability and strengthened by continuous innovation, these analyzers, traded under Carlo Erba Instruments label until recently, position Fisons Instruments as a leader in all fields of automated elemental analysis.

In continuance of our commitment to excellence and resulting from years of research and development, we proudly offer the highest quality of consumables needed for our elemental analyzers. These premium chemicals perform to our highest expectations and guarantee the most reliable results from our elemental analyzers, maximizing analytical performance.

This catalogue will give you finger-tip access to properly identifying and determining which consumables you actually need. In order to simplify order entry and avoid any confusion, each part is labelled with a specific identification number. Pictures are also available for easy identification.

A world-wide networking system allows us to keep a complete stock of consumables, guaranteeing their constant availability and prompt delivery to you. If you have any questions regarding a specific part or an application, our Elemental Analysis Specialists are available to give you the correct answer. A complete list of sales and service network can be found on the back cover.

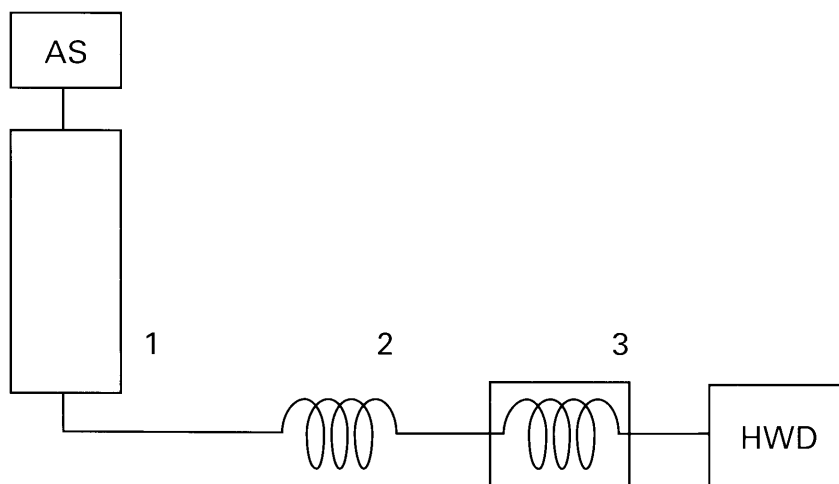
Fisons Instruments has always been and remains committed to providing only the highest quality consumables to guarantee unmatched performance of your elemental analyzer.

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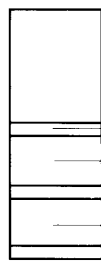
EA 1108 - CHNS DETERMINATION

The parts required for the determination of CHNS are summarized in the following schematic lay-out:



Where:

1: Combustion/Reduction reactor



Quartz Wool (P/N 338.222.00)

Tungstic Anhydride (P/N 338.246.00)

QW

Reduced Pure Copper Wires (P/N 338.353.10)

QW

Combustion/Reduction reactor (set of 2) (P/N 468.200.00)

Combustion/Reduction o-ring (set of 10) (P/N 290.329.10)

Pre-packed reactors for CHNS determination are available: P/N 468.020.05

2: PTFE tubing

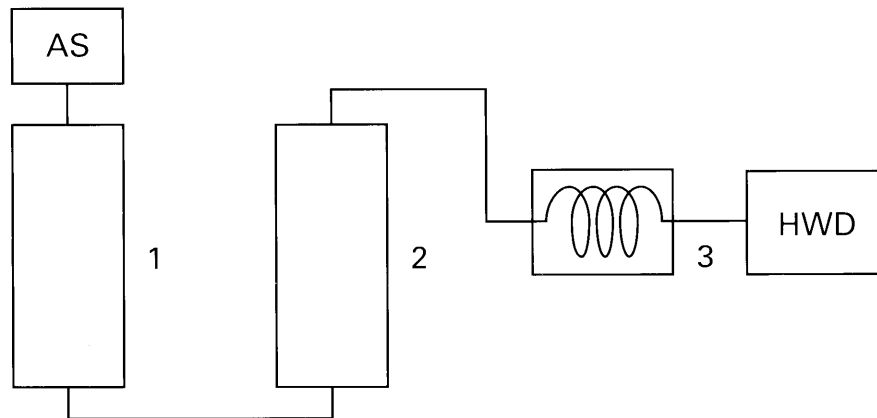
2.5 m length, diameter 2 x 1 mm (P/N 420.015.01)

3: Packed column for CHNS determination

2 m length, diameter 6 x 4 mm (P/N 260.082.06)

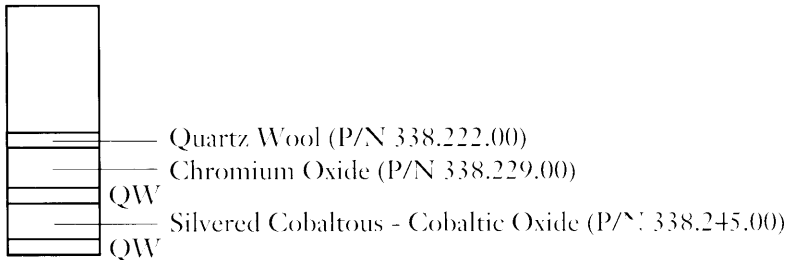
EA 1108 - CHN DETERMINATION

The parts required for the determination of CHN are summarized in the following schematic lay-out:

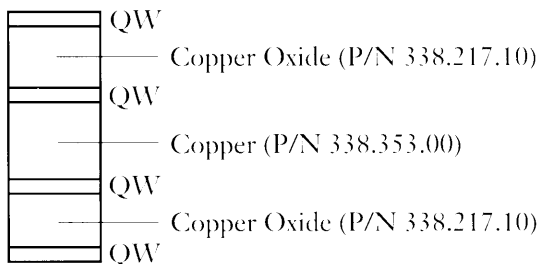


Where:

1: Combustion reactor



2: Reduction reactor



Combustion/Reduction reactor (set of 2) (P/N 468.200.00)

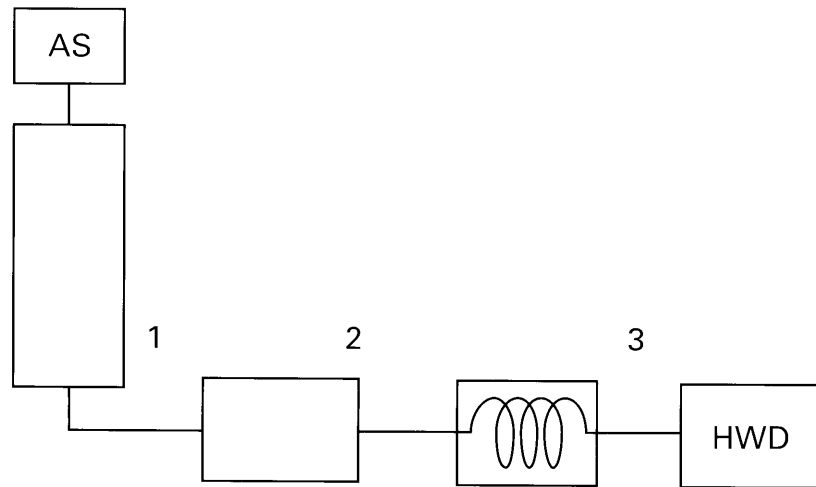
Combustion/Reduction o-ring (set of 10) (P/N 290.329.10)

3 : Packed column for CHN determination

2 m length, diameter 6 x 4 mm (P/N 260.082.00)

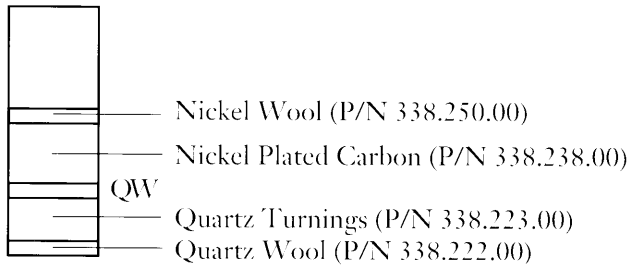
EA 1108 - OXYGEN DETERMINATION

The parts required for the determination of Oxygen are summarized in the following schematic lay-out:



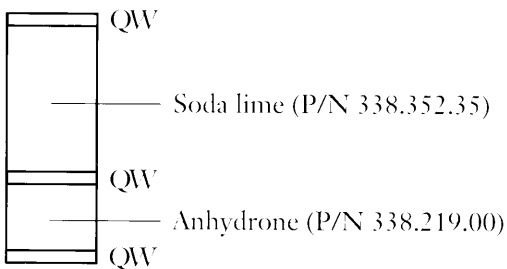
Where:

1: Pyrolysis reactor



Pyrolysis reactor (set of 2) (P/N 468.200.00)
 Pyrolysis o-ring (set of 10) (P/N 290.329.10)

2: Adsorption trap



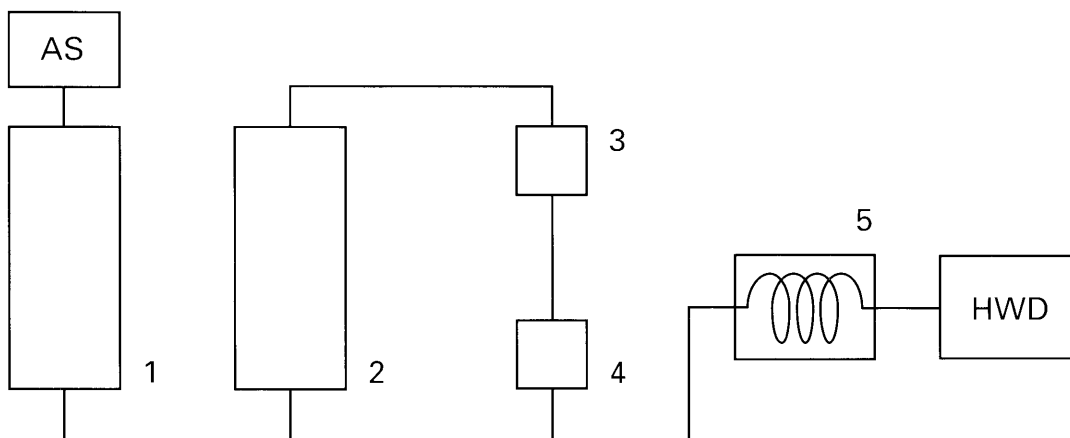
Adsorption trap (P/N 281.131.00)
 Adsorption trap o-ring (P/N 290.136.03)

3: Packed column for Oxygen determination

1.5 m length, diameter 6 x 4 mm (P/N 260.079.00)

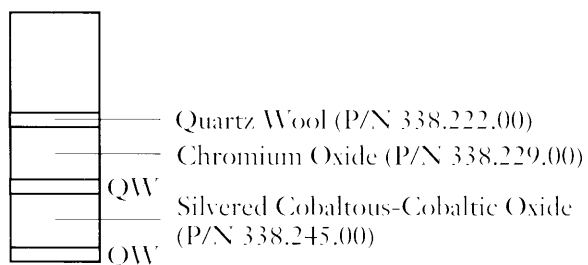
NA 1500 - N DETERMINATION

The parts required for the determination of Nitrogen are summarized in the following schematic lay-out

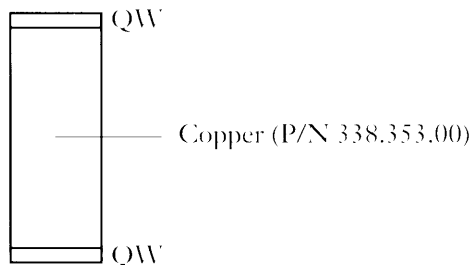


Where:

1: Combustion reactor

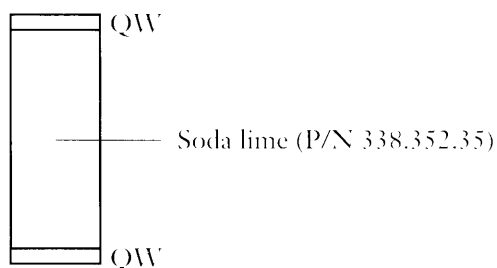


2: Reduction reactor



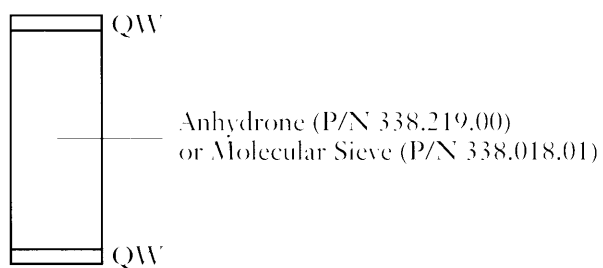
Combustion/Reduction reactor (set of 2) (P/N 468.200.00)
Combustion/Reduction o-ring (set of 10) (P/N 290.329.10)

3: Adsorption trap for CO₂



Adsorption trap for CO₂ (P/N 281.130.90)

4: Adsorption trap for H₂O



Adsorption trap for H₂O (P/N 281.131.00)

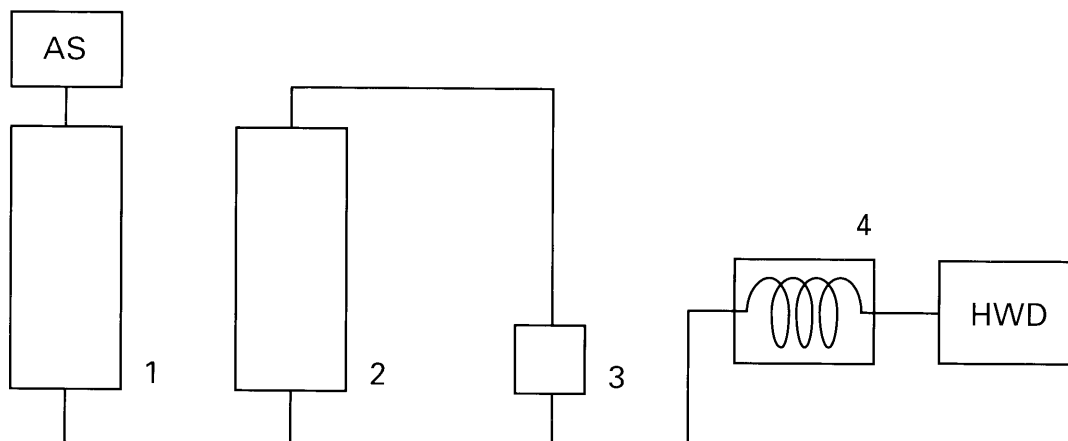
Adsorption trap o-ring (set of 2) (P/N 290.136.03)

5: Packed column for N determination

2 m length, diameter 6 x 4 mm (P/N 260.082.00)

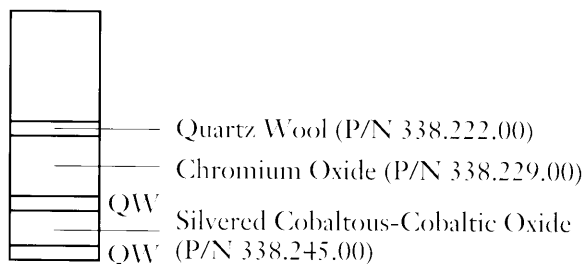
NA 1500 - NC DETERMINATION

The parts for the determination of Nitrogen-Carbon are summarized in the following schematic lay-out:

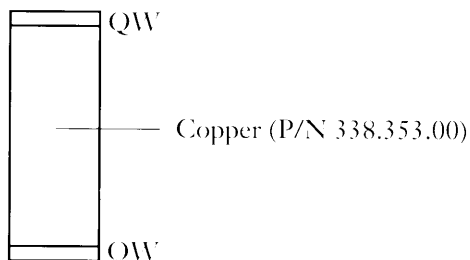


Where:

1: Combustion reactor

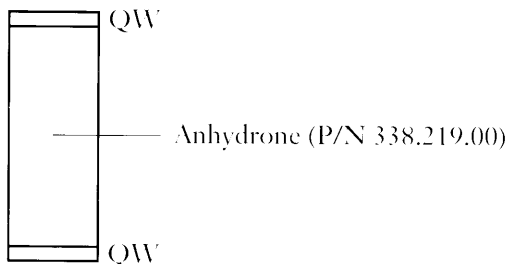


2: Reduction reactor



Combustion/Reduction reactor (set of 2) (P/N 468.200.00)
 Combustion/Reduction o-ring (set of 10) (P/N 290.329.10)

3: Adsorption trap for H₂O



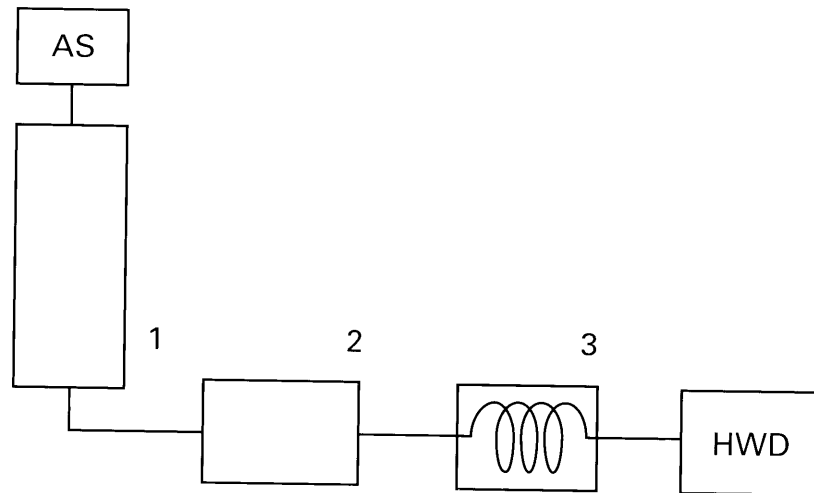
Adsorption trap for H₂O (P/N 281.131.00)
 Adsorption trap o-ring (P/N 290.136.03)

4: Packed column for NC determination

3 m length, diameter 6 x 4 mm (P/N 260.082.05)

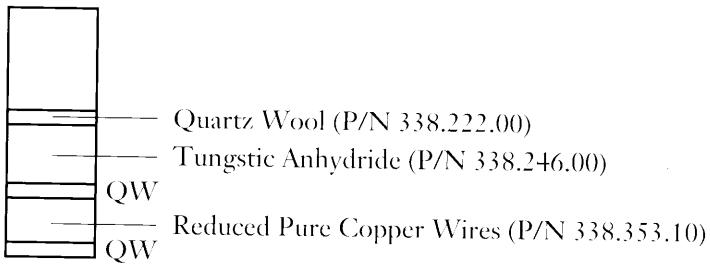
NA 1500 - NCS DETERMINATION

The parts required for the determination of NCS are summarized in the following schematic lay-out:



Where:

1: Combustion/Reduction reactor

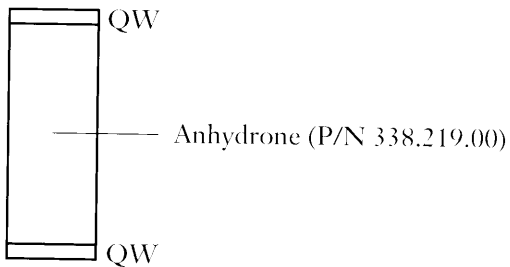


Combustion/Reduction reactor (set of 2) (P/N 468.200.00)

Combustion/Reduction o-ring (set of 10) (P/N 290.329.10)

Pre-packed reactors for NCS determination are available: P/N 468.020.05

2: Adsorption trap for H₂O



Adsorption trap (P/N 281.131.00)

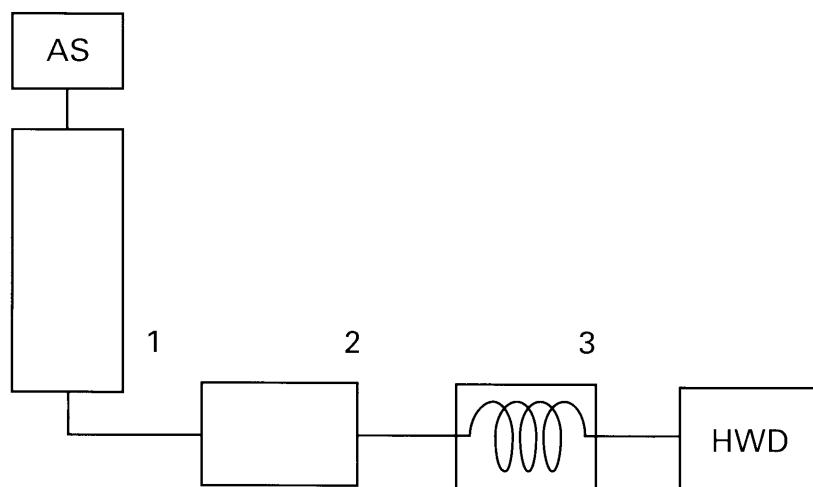
Adsorption trap o-ring (set of 2) (P/N 290.136.03)

3: Packed column for NCS determination

2 m length, diameter 6 x 4 mm (P/N 260.082.06)

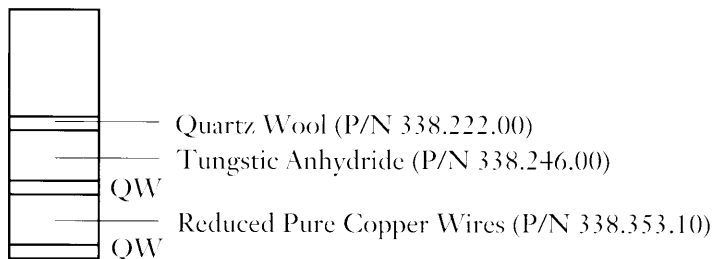
NA 1500 AND EA 1108 - SULPHUR DETERMINATION

The parts required for the determination of Sulphur are summarized in the following schematic lay-out:



Where:

1 : Combustion/Reduction reactor

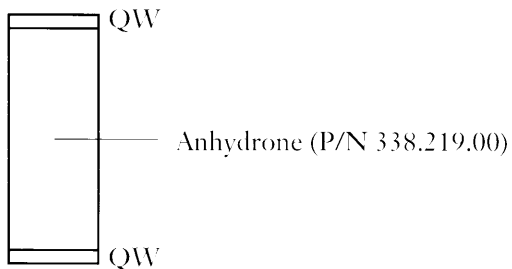


Combustion/Reduction reactor (set of 2) R (P/N 468.200.00)

Combustion/Reduction o-ring (set of 10) (P/N 290.329.10)

Pre-packed reactors for S determination are available: P/N 468.020.05

2: Adsorption trap for H₂O



Adsorption trap (P/N 281.131.00)

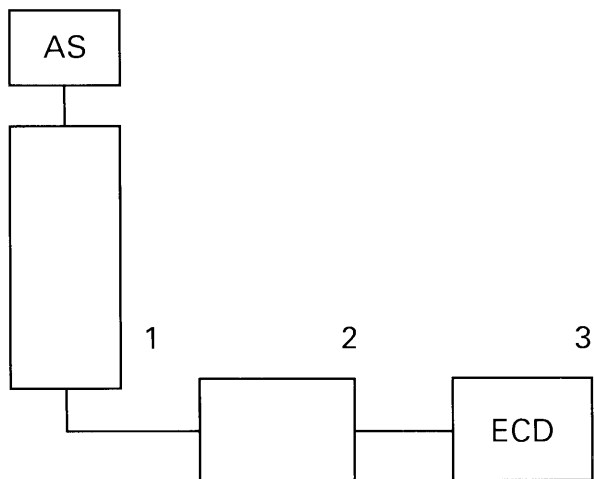
Adsorption trap o-ring (P/N 290.136.03)

3: Packed column for S determination

0.80 m length, diameter 6 x 4 mm (P/N 260.078.00)

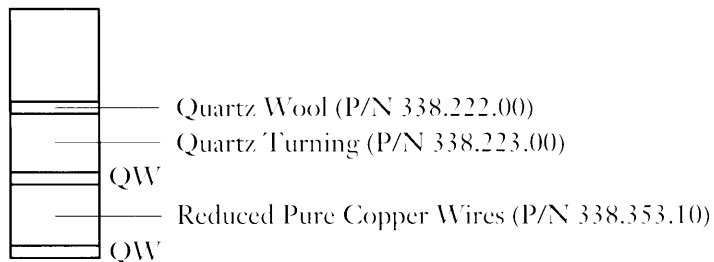
NA 1500 AND EA 1108 - SULPHUR TRACE DETERMINATION

The parts required for the determination of traces of Sulphur are summarized in the following schematic lay-out:



Where:

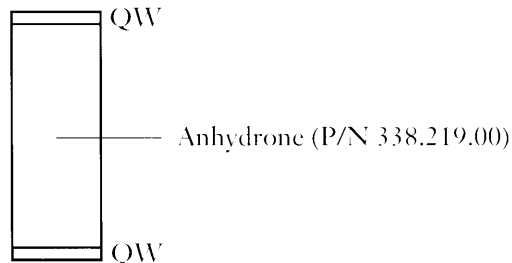
1: Combustion/Reduction reactor



Combustion/Reduction reactor (set of 2) (P/N 468.200.00)
 Combustion/Reduction o-ring (set of 10) (P/N 290.329.10)

Pre-packed reactors for S determination are available: P/N 468.020.05

2: Adsorption trap for H₂O

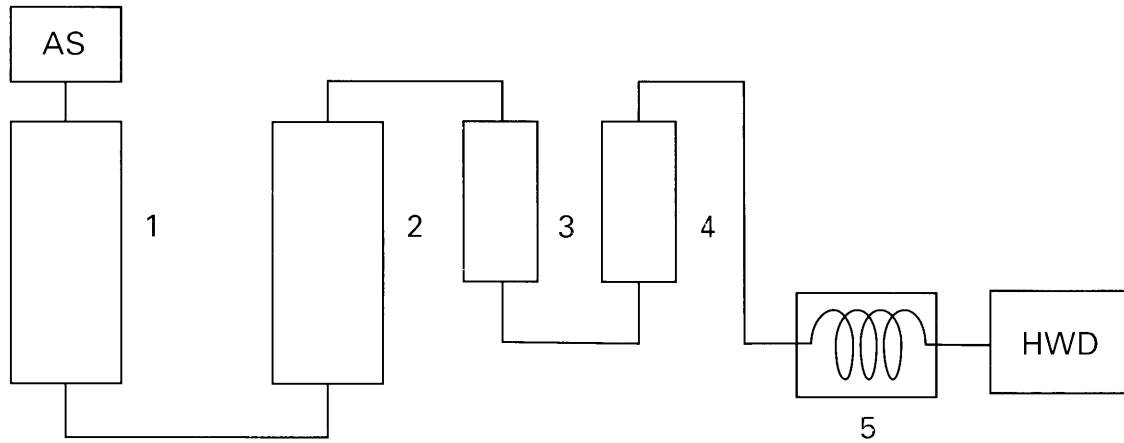


Adsorption trap (P/N 281.131.00)
 Adsorption trap o-ring (set of 2) (P/N 290.136.03)

3: ECD Detector (P/N 419.075.30) It includes a packed column for sulphur trace analysis (P/N 260.185.05)
ECD Control Module (P/N 432.097.60)

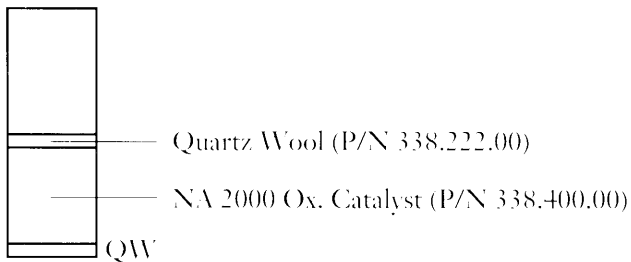
NA 2000 NITROGEN DETERMINATION AND PROTEIN CONTENT

The parts required for the determination of Nitrogen and Protein content are summarized in the following schematic lay-out:



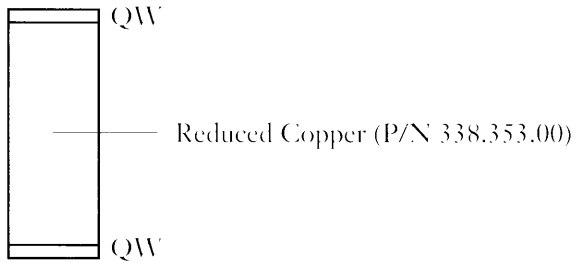
Where:

1: Combustion reactor



Pre-packed Combustion reactor (P/N 468.006.60)

2: Reduction reactor

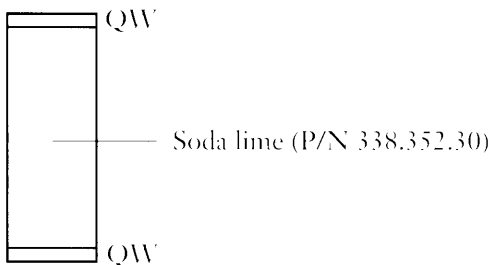


Pre-packed Reduction reactor (P/N 468.006.50)

Combustion/Reduction reactor (empty) (set of 2) (P/N 468.200.00)

Combustion/Reduction o-ring (set of 10) (P/N 290.329.10)

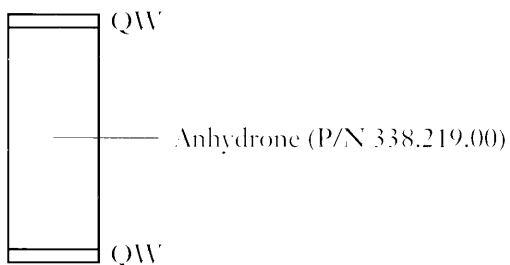
3: NA 2000 Adsorption trap for CO₂ and H₂O



NA 2000 Adsorption trap (empty) (P/N 281.130.60)

O-ring for NA 2000 Adsorption trap (set of 2) (P/N 290.100.82)

4: NA 2000 Adsorption trap for H₂O



5: Packed column for NA 2000

1 m length, diameter 6 x 4 mm (P/N 260.700.04)

KITS OF CONSUMABLES AND SPARE PARTS FOR 1000 ANALYSES

These kits allow the users to program their analytical work load at a lower price instead of placing orders for individual consumables.

EA 1108

- A 190.012.03 KIT FOR 1000 CHN ANALYSES
- B 190.012.01 KIT FOR 1000 CHN AND 1000 O ANALYSES
- C 190.012.04 KIT FOR 1000 CHNS ANALYSES
- D 190.012.02 KIT FOR 1000 CHNS AND 1000 O ANALYSES
- E 190.013.01 KIT FOR 1000 O ANALYSES

THE KITS A, B, C, D, AND E CONTAIN THE PARTS LISTED BELOW:

	A	B	C	D	E
240.064.00 TIN SAMPLE CONTAINER (SET OF 100)	10	10	10	10	-
468.200.00 COMBUSTION/REDUCTION REACTOR (SET OF 2)	3	5	2	4	2
338.219.00 ANHYDRONE (FLASK OF 100 g)	-	1	-	1	1
338.222.00 QUARTZ WOOL (FLASK OF 5 g)	2	2	2	2	1
338.223.00 QUARTZ TURNINGS (FLASK OF 50 g)	2	3	-	3	3
338.353.00 REDUCED COPPER (FLASK OF 100 g)	4	4	-	-	-
338.353.10 REDUCED PURE COPPER WIRES (AMPOULE OF 40 g)	-	-	4	4	-
338.352.35 SODA LIME (FLASK OF 100 g)	-	1	-	1	1
338.229.00 CHROMIUM OXIDE (FLASK OF 25 g)	4	4	-	-	-
338.245.00 SILVERED COBALTOUS COBALTIC OXIDE (25 g)	4	4	-	-	-
338.217.10 COPPER OXIDE (FLASK OF 50 g)	2	2	-	-	-
290.136.03 SEALING O-RING FOR ADSORPTION TRAP (SET OF 2)	-	1	-	1	1
290.329.10 O-RING FOR COMBUSTION TUBES (SET OF 10)	1	1	1	1	1
338.224.00 CYCLOHEXANONE 2,4 DNP (1 g)	1	1	-	-	1
338.244.00 ATROPINE (FLASK OF 2 g)	1	1	-	-	-
338.246.00 TUNGSTIC ANHYDRIDE (25 g)	-	-	4	-	-
338.352.00 BBOT STANDARD	-	-	1	1	-
338.367.00 ACETANILIDE (FLASK OF 2 g)	1	1	-	1	-
240.054.00 SILVER SAMPLE CONTAINERS (SET OF 100)	-	10	-	10	10
338.225.00 BENZOIC ACID (FLASK OF 2 g)	-	1	-	1	1
338.238.00 NICKELIZED CARBON	-	4	-	4	4
338.250.00 NICKEL WOOL (2 g)	-	2	-	2	2
338.251.00 SULPHANILAMIDE (FLASK OF 2 g)	-	-	1	1	-
338.375.10 VANADIUM PENTOXIDE	-	-	1	1	-
420.015.01 TEFLON TUBE	-	-	1	1	-

NA 1500

- F 190.024.00 KIT FOR 1000 N ANALYSES
 G 190.024.01 KIT FOR 1000 NC ANALYSES
 H 190.024.02 KIT FOR 1000 NCS ANALYSES

THE KITS F, G AND H CONTAIN THE PARTS LISTED BELOW:

	F	G	H
240.064.00 TIN SAMPLE CONTAINER (SET OF 100)	10	10	10
468.200.00 COMBUSTION/REDUCTION REACTOR (SET OF 2)	3	3	2
338.219.00 ANHYDRONE (FLASK OF 100 g)	1	1	1
338.222.00 QUARTZ WOOL (FLASK OF 5 g)	2	2	2
338.353.00 REDUCED COPPER (FLASK OF 100 g)	4	4	-
338.353.10 REDUCED PURE COPPER WIRES (40 g)	-	-	4
338.352.35 SODA LIME (FLASK OF 100 g)	1	-	-
338.229.00 CHROMIUM OXIDE (FLASK OF 25 g)	+	+	-
338.245.00 SILVERED COBALTOUS COBALTIC OXIDE (25 g)	+	+	-
338.217.10 COPPER OXIDE (FLASK OF 50 g)	-	2	-
290.136.03 SEALING O-RING FOR ADSORPTION TRAP (SET OF 2)	2	2	1
290.329.10 O-RING FOR COMBUSTION TUBES (SET OF 10)	1	1	1
338.224.00 CYCLOHEXANONE 2,4 DNPH (FLASK OF 1 g)	1	1	-
338.244.00 ATROPINE (FLASK OF 2 g)	1	1	-
338.246.00 TUNGSTIC ANHYDRIDE (FLASK OF 25 g)	-	-	4
338.352.10 BBOT STANDARD (2 g)	-	-	1
338.251.00 SULPHANILAMIDE (FLASK OF 2 g)	-	-	1
338.375.20 "ENRICHED" PHENANTHRENE (FLASK OF 1 g)	1	1	1
338.375.10 VANADIUM PENTOXIDE (FLASK OF 1 g)	-	-	1
338.375.40 LEAD OXIDE (FLASK OF 1 g)	1	1	-

NA 2000

- L 190.024.06 KIT FOR 1000 ANALYSES



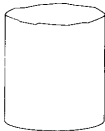







THE KIT L CONTAINS THE PARTS LISTED BELOW:

	L
252.080.00 NA 2000 TIN CONTAINER (SET OF 100)	10
468.200.00 COMBUSTION/REDUCTION REACTOR (SET OF 2)	3
338.219.00 ANHYDRONE (FLASK OF 100 g)	2
338.222.00 QUARTZ WOOL (FLASK OF 50 g)	2
338.223.00 QUARTZ TURNINGS (FLASK OF 50 g)	1
338.400.00 NA 2000 OXIDATION CATALYST (quantity for 1 oxidation reactor)	3
338.353.00 REDUCED COPPER (FLASK OF 100 g)	5
338.352.30 NA 2000 SODA LIME (FLASK OF 200 g)	2
338.352.20 METHIONINE (FLASK OF 25 g)	1
290.100.82 O-RING FOR WATER AND CARBON DIOXIDE TRAPS (SET OF 2)	2
290.329.10 O-RING FOR COMBUSTION/REDUCTION REACTORS (SET OF 10)	1

SAMPLE CONTAINERS

You will find here an optimized guide for the best choice of containers tailored to your specific analytical needs, through a detailed specification both for tin and silver containers to be used according to the different applications.

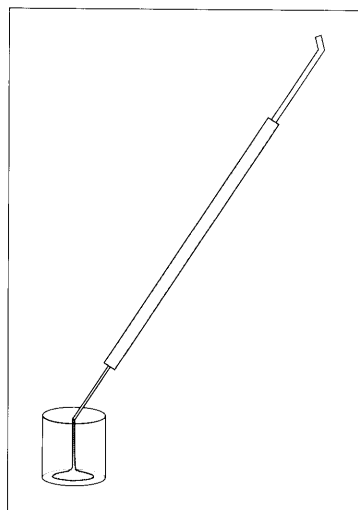
To avoid deformation problems and to guarantee a complete use of all the sample containers, these are conveniently supplied and protected in adequate plastic boxes in package of 100.

<p>"SOFT" (pressed tin/silver container)</p>	<p><i>"Soft" containers are obtained by pressing light metal foil.</i></p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  TYPE A TIN </div> <div style="text-align: center;">  TYPE B TIN </div> <div style="text-align: center;">  TYPE C TIN </div> <div style="text-align: center;">  TYPE H SILVER </div> <div style="text-align: center;">  TYPE I SILVER </div> </div>
<p>"HARD" (flat smooth bottom tin/silver container)</p>	<p><i>"Hard" tin containers are heavier than the "soft" ones and allow hermetic sealing. For this reason the "hard" ones are suitable for liquid samples. The "hard" tin containers are obtained by moulding ultrapure tin sheets.</i></p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  TYPE D TIN </div> <div style="text-align: center;">  TYPE E TIN </div> <div style="text-align: center;">  TYPE F TIN </div> <div style="text-align: center;">  TYPE G TIN </div> <div style="text-align: center;">  TYPE L SILVER </div> </div>

TIN CONTAINERS

TYPE A	240.064.00	Universal "soft" tin containers Set of 100 Recommended for SOLID samples (organics, soils, sediments, food, plastics, coal, etc.) or LIQUIDS samples adsorbed on inert solid materials Chromosorb P/N 338.375.30
TYPE B	240.053.00	Small "soft" tin containers for solid samples Set of 100 Recommended for solid samples using the Elemental Analyzer EA 1106
TYPE C	252.080.00	NA 2000 tin containers
TYPE D	240.088.10	"Hard" tin containers Set of 100 Recommended for the analysis of any viscous sample.
TYPE E	240.088.20	"Hard" tin container Set of 100 Recommended for the analysis of any liquids (for volatile liquids we recommend the use of liquid sealing device P/N 205.030.00).
TYPE F	240.072.00	"Hard" tin containers Set of 100 Suggested for the analysis of trace elements (N, C, S) in liquids such as water, wine, beer, milk, urine etc.
TYPE G	240.070.00	"Hard" tin capillary Set of 50 Suggested for the analysis of liquid samples when the material is available in very small amounts. Useful for volatile samples. Use of sealing device P/N 205.030.00 is highly recommended.

VISCOUS SAMPLING TECHNIQUE



LIQUID SAMPLING TECHNIQUE

	 Add Chromosorb 1 spatula	WEIGH
Add the liquid sample on the Chromosorb surface		 Close and weigh

SILVER CONTAINERS

TYPE H 240.054.00

Universal "soft" silver container
Set of 100
Recommended for oxygen determination for solid samples.

TYPE I 240.054.05

"Soft" silver containers
Set of 100
Recommended for Total Organic Carbon (T.O.C.) determination according to the Fisons Instruments method (patent n. 90110186.5)

SAMPLING TECHNIQUE FOR T.O.C. DETERMINATION

1 Ag capsules	2 Add 5 - 20 mg of sample	3 WEIGH
4 Add 1 drop of HCl 1:1	5 Leave at 80°C until dry	6 ANALYSE

TYPE L 240.051.00

"Hard" silver container
Set of 50
Recommended for oxygen analysis of liquid samples (e.g.: gasoline).
The Sealing Device, P/N 205.030.00, is highly suggested for these liquid samples.

SAMPLE CONTAINERS MANUFACTURED BY FISONS INSTRUMENTS DO NOT REQUIRE CLEANING. THEY CAN BE USED WITHOUT ANY PRE-TREATMENT DIRECTLY FROM THE PACKAGE.

REACTOR TUBES

THE REACTOR TUBES HAVE BEEN MANUFACTURED IN HIGH QUALITY QUARTZ TO GUARANTEE EXCELLENCE OF RESULTS AND DURABILITY. THE REACTORS LISTED IN THIS CATALOGUE MUST BE USED ON THE "LATEST GENERATION" ELEMENTAL ANALYZERS: EA 1108, NA 1500 SERIES 2 AND NA 2000. FOR ANY PREVIOUS VERSION OF ELEMENTAL ANALYZERS, REACTORS SHOULD BE SPECIFICALLY REQUESTED.

TO INCREASE THE REACTORS LIFETIME PLEASE REFER TO THE REACTOR PACKING SECTION OF THE INSTRUCTION MANUALS.

- 468.200.00 QUARTZ REACTOR TUBES (Empty) (SET OF 2)
- 468.020.05 PREPACKED COMBUSTION/REDUCTION REACTOR FOR CHNS
Combustion reactor ready to use.
Users of EA 1108 CHNS or S AND NA 1500 NCS or S analyses can benefit from this new pre-packed reactor in many ways. No more tubes, catalysts or packing manipulation.
A few minutes to replace the reactor and the analyzer is back to work again.
- 468.006.60 PREPACKED COMBUSTION REACTOR FOR NA 2000
- 468.006.50 PREPACKED REDUCTION REACTOR FOR NA 2000
- 468.200.40 QUARTZ REACTOR TUBE FOR DIRECT LIQUID SAMPLING (see page 19)

Note: THE TRANSPARENT QUARTZ REACTOR (P/N 468.016.00) AND THE OPAQUE QUARTZ REACTOR (P/N 468.017.00) HAVE BEEN REPLACED BY THE NEW AND ONLY ONE AVAILABLE : THE CYLINDRICAL QUARTZ REACTOR (P/N 468.200.00)

COUPLING JOINTS

CHN and N/NC VERSION

To connect the oxi-reactor to the reduction reactor on the EA 1108 and on the NA 1500 2nd SERIES the COUPLING JOINT (P/N 347.095.12) is required.

To connect the oxi-reactor to the reduction reactor on the NA 1500 (previous series *) the COUPLING JOINT (P/N 347.095.23) is required.

() NA 1500 1ST SERIES: RANGING FROM SERIAL NUMBER 193.331 TO 227.771*

CHNS/O AND NCS VERSION

To connecting the combustion reactor to the chromatographic column on the EA 1108 and NA 1500 (1st and 2nd SERIES) the COUPLING JOINT (P/N 347.095.18) is required.

ADSORPTION TRAPS

- 281.131.00 ADSORPTION TRAP FOR H₂O
- 281.130.90 ADSORPTION TRAP FOR CO₂
- 281.130.60 ADSORPTION TRAP FOR NA 2000

CHROMATOGRAPHIC COLUMNS

A large choice of columns for any type of application is available. If properly sealed with the original blind end fittings the column can be stocked for long periods.

EA 1108

- 260.082.06 PACKED COLUMN FOR CHNS DETERMINATION
- 260.082.00 PACKED COLUMN FOR CHN DETERMINATION
- 260.079.00 PACKED COLUMN FOR O DETERMINATION

NA 1500

- 260.082.00 PACKED COLUMN FOR N DETERMINATION
- 260.082.05 PACKED COLUMN FOR NC DETERMINATION
- 260.082.06 PACKED COLUMN FOR NCS DETERMINATION
- 260.078.00 PACKED COLUMN FOR S DETERMINATION

NA 2000

- 260.700.04 PACKED COLUMN FOR N DETERMINATION

FITTINGS & TUBES

- 290.340.45 TUBING OLIVE, ALUMINIUM, 2 mm (SET OF 10)
- 350.404.03 TUBING NUT, STAINLESS STEEL, 2 mm (SET OF 10)
- 350.341.08 CONNECTOR, TUBE, PUSH FIT (SET OF 5)
- 347.154.01 COLUMN FITTING, 6 mm to 2 mm
- 350.454.00 BLANKING NUT, STAINLESS STEEL (SET OF 10)
- 350.451.00 BLANKING NUT, BRASS (SET OF 10)
- 420.015.01 TUBE PTFE 2 x 1 mm (LENGTH 3 m)
- 391.025.00 TUBE, STAINLESS STEEL, 2 x 1 mm, (LENGTH 3 m)

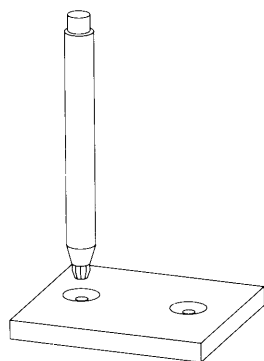
O-RINGS

- 290.303.04 O-RING (VITON) FOR GAS CONNECTIONS (SET OF 10)
- 290.303.01 O-RING (VITON) FOR TUBE CONNECTIONS DIAM. 2 mm (SET OF 10)
- 290.136.03 SEALING O-RING FOR ADSORPTION TRAPS
- 290.050.46 SEALING O-RING FOR AUTOSAMPLER (P/N 251.050.45)
- 290.329.10 O-RING (VITON) FOR REACTION TUBES (SET OF 10)
- 290.000.82 O-RING FOR NA 2000 TRAPS (SET OF 2)

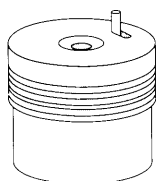
OXYGEN LOOPS

- 245.010.00 OXYGEN METERING LOOP 25 ml
- 245.004.00 OXYGEN METERING LOOP 10 ml
- 245.003.00 OXYGEN METERING LOOP 5 ml
- 231.014.10 OXYGEN LOOP FOR NA 2000
- 313.021.00 MEMBRANE FOR OXYGEN INJECTION VALVE (SET OF 10)

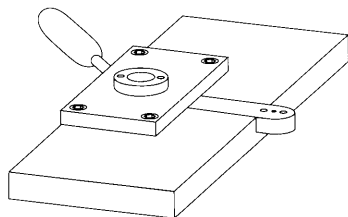
SAMPLE PREPARATION ACCESSORIES



- 205.003.10 SEALING DEVICE FOR SOLID CONTAINERS FOR NA 1500 AND EA 1108
 205.003.00 SEALING DEVICE FOR SOLID CONTAINERS FOR EA 1106



- 252.090.10 SEALING DEVICE FOR NA 2000 CONTAINERS



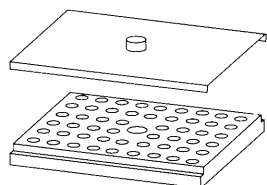
- 205.030.02 SEALING DEVICE FOR LIQUID CONTAINERS
 This device allows the analysis of hygroscopic solid compounds and volatile liquid substances without variation of weight.
 The samples are introduced in the container using a spatula, syringes or generic needles.
 We suggest the use of liquid tin containers or capillaries according to the viscosity of the liquid sample.
 The container is then placed in the sealing device slide.
 The container is to be purged with a flow of oxygen or helium before closing.
 The container is tightly closed and the constancy of weight is monitored by an electronic balance.
 For liquids with high vapour pressure use tin capillaries: the treatment with inert gas is not necessary because the vapour pressure generated by the liquid sample is sufficient to flush the atmospheric gases from the container.

- 205.005.00 FORCEPS

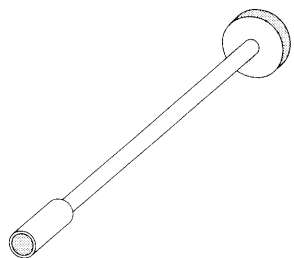
- 205.006.00 SPATULA FOR CONTAINER FILLING (EA 1108 AND NA 1500)

- 205.006.20 SPATULA FOR CONTAINER FILLING (NA 2000)

- 365.020.01 FIXED NEEDLE SYRINGE 10 µl



- POCKET SAMPLE HOLDER
 This device is used to carry up to 52 weighed and sealed containers from the balance to the autosampler mounted on the instrument.
- 240.100.24 FOR EA 1108 OR NA 1500
 240.100.23 FOR EA 1106 OR SMALL CONTAINERS



276.060.10 TUBE CLEANING DEVICE

Recommended tool to clean the quartz reactor when replacing the catalyst (for EA 1108, NA 1500 and NA 2000).

ACCESSORIES FOR MANUAL INJECTION

- 299.021.28 DIRECT INJECTION DEVICE FOR LIQUID SAMPLING
This device permits the manual introduction of both liquid and gas phase samples into the analyser sample inlet using a standard GC syringe.
- 190.041.38 MANUAL INJECTION DEVICE FOR NA 2000

CONSUMABLES FOR MANUAL INJECTION

- 365.020.00 FIXED NEEDLE SYRINGE 5 µl
365.020.01 FIXED NEEDLE SYRINGE 10 µl
365.005.30 FIXED NEEDLE GASTIGHT SYRINGE FOR GAS INJECTION 500 µl
313.032.00 SEPTUM (SET OF 50)
468.200.40 QUARTZ REACTOR TUBE FOR DIRECT LIQUID SAMPLING

ACCESSORIES AND CONSUMABLES FOR AS-V 570 AUTOSAMPLER FOR LIQUIDS

- 240.740.03 CRIMP-TOP VIAL 1.5 - 12 x 23 mm - 11 mm FINISH (SET OF 100)
386.091.00 ALUMINIUM SEAL - 1 mm - WITH TEFLON FACED SEPTA (SET OF 100)
205.110.00 HAND CRIMPER 11 mm
365.008.00 SYRINGE 3 MICROLITERS WITH NEEDLE 0.57 x 0.13 mm
365.009.00 SYRINGE 5 MICROLITERS WITH NEEDLE 0.57 x 0.13 mm
365.010.00 SYRINGE 10 MICROLITERS WITH NEEDLE 0.57 x 0.13 mm
365.500.00 NEEDLE 3 MICROLITERS 0.57 x 0.13 mm
365.500.01 NEEDLE 5 MICROLITERS 0.57 x 0.13 mm
365.500.02 NEEDLE 10 MICROLITERS 0.57 x 0.13 mm
313.032.00 SEPTUM (SET OF 50)
468.200.40 QUARTZ REACTOR TUBE FOR DIRECT LIQUID SAMPLING

ACCESSORIES FOR GAS SAMPLING

- 190.041.14 AUTOMATIC GAS SAMPLING DEVICE
This device is recommended for the automatic and unattended sampling of any gas from a cylinder or a pipeline by means of a gas loop injection through a Bimatic valve.
It can be operated by any data handling system (DP 200, Eager 200).

ACCESSORIES AND CONSUMABLES FOR AS-800 AUTOSAMPLER FOR LIQUIDS

- 240.300.00 VIALS 10 cc (SET OF 5)
386.060.35 CAPS FOR VIALS (SET OF 100)
240.700.05 VIALS 2.5 cc (SET OF 100)
386.060.40 CAPS FOR VIALS 2.5 cc (SET OF 100)
313.032.09 SEPTUM (SET OF 50)
365.005.70 SYRINGE 10 µl
365.002.04 SYRINGE 100 µl

REAGENTS/CHEMICALS FOR EA 1108

CHNS DETERMINATION

- 338.354.20 TUNGSTIC ANHYDRIDE ON PURE ALUMINA (FLASK OF 25 g)
- 338.246.00 TUNGSTIC ANHYDRIDE (FLASK OF 25 g)
- 338.222.00 QUARTZ WOOL (FLASK OF 5 g)
- 338.223.00 QUARTZ TURNINGS (FLASK OF 50 g)
- 338.221.00 COPPER SULPHATE, hydrated (FLASK OF 200 g)
for doping helium with water
- 338.375.10 VANADIUM PENTOXIDE (FLASK OF 1 g)
additive for S analysis in inorganic samples
- 338.353.10 PURE COPPER WIRES (AMPOULE 40 g)
- 338.375.30 CHROMOSORB W (FLASK OF 25 g)
for liquid samples adsorption

CHN DETERMINATION

- 338.229.00 CHROMIUM OXIDE (FLASK OF 25 g)
- 338.228.00 COBALTOUS-COBALTIC OXIDE (FLASK OF 25 g)
- 338.245.00 SILVERED COBALTOUS-COBALTIC OXIDE (FLASK OF 25 g)
- 338.217.10 COPPER OXIDE (FLASK OF 50 g)
- 338.354.00 KOERBL CATALYST ADSORBENT FOR HALOGENS (10 g)
- 338.353.00 COPPER GRAINS (2 AMPOULES 50 g)
- 338.222.00 QUARTZ WOOL (FLASK OF 5 g)
- 338.223.00 QUARTZ TURNINGS (FLASK OF 50 g)
- 338.221.00 COPPER SULPHATE, hydrated (FLASK 200 g)
for doping helium carrier gas with water
- 338.375.40 LEAD OXIDE (Pb₃O₄) (FLASK OF 1 g)
additive for refractory substances for sulphur determination
- 338.375.30 CHROMOSORB W (FLASK OF 25 g)
for liquid samples adsorption

O DETERMINATION

- 338.238.00 NICKEL PLATED CARBON (FLASK OF 5 g)
- 338.222.00 QUARTZ WOOL (FLASK OF 5 g)
- 338.250.00 NICKEL WOOL (FLASK OF 2 g)
- 338.223.00 QUARTZ TURNINGS (FLASK OF 50 g)
- 338.219.00 ANHYDRONE (FLASK OF 100 g)
- 338.352.35 SODA LIME (FLASK OF 100 g)
- 338.018.01 MOLECULAR SIEVE 3A 1/16 (FLASK OF 100 g)

REAGENTS/CHEMICALS FOR NA 1500

N DETERMINATION

- 338.229.00 CHROMIUM OXIDE (FLASK OF 25 g)
- 338.217.10 COPPER OXIDE (FLASK OF 50 g)
- 338.245.00 SILVERED COBALTOUS-COBALTIC OXIDE (FLASK OF 10 g)
absorption of halogens and SO₂
- 338.354.00 KOERBL CATALYST (FLASK OF 10 g)
absorption of halogens and SO₂
- 338.228.00 COBALTOUS-COBALTIC OXIDE (FLASK OF 25 g)
- 338.353.00 REDUCED COPPER GRAINS (FLASK OF 100 g)
- 338.018.01 MOLECULAR SIEVE 3A FOR H₂O TRAP (FLASK OF 100 g)
- 338.219.00 ANHYDRONE FOR H₂O TRAP (FLASK OF 100 g)
- 338.352.35 SODA LIME FOR CO TRAP (FLASK OF 100 g)
- 338.222.00 QUARTZ WOOL (FLASK OF 5 g)
- 338.223.00 QUARTZ TURNINGS (FLASK OF 50 g)
- 338.375.30 CHROMOSORB W (FLASK OF 25 g)
for liquid samples adsorption
- 338.375.40 LEAD OXIDE (FLASK OF 1 g) additive for refractory substances

NC DETERMINATION

- 338.229.00 CHROMIUM OXIDE (FLASK OF 25 g)
- 338.217.10 COPPER OXIDE (FLASK OF 50 g)
- 338.245.00 SILVERED COBALTOUS-COBALTIC OXIDE (FLASK OF 10 g)
absorption of halogens and SO₂
- 338.354.00 KOERBL CATALYST (FLASK OF 10 g)
absorption of halogens and SO₂
- 338.228.00 COBALTOUS-COBALTIC OXIDE (FLASK OF 25 g)
- 338.353.00 REDUCED COPPER GRAIN (FLASK OF 100 g)
- 338.018.01 MOLECULAR SIEVE 3A FOR H₂O TRAP (FLASK OF 100 g)
- 338.219.00 ANHYDRONE FOR H₂O TRAP (FLASK OF 100 g)
- 338.222.00 QUARTZ WOOL (FLASK OF 5 g)
- 338.223.00 QUARTZ TURNINGS (FLASK OF 50 g)
- 338.375.30 CHROMOSORB W (FLASK OF 25 g)
for liquid samples adsorption
- 338.375.40 LEAD OXIDE (FLASK OF 1 g)
additive for refractory substances

NCS DETERMINATION

- 338.354.20 TUNGSTIC ANHYDRIDE ON PURE ALUMINA (FLASK OF 25 g)
- 338.246.00 TUNGSTIC ANHYDRIDE (FLASK OF 25 g)
- 338.353.10 REDUCED PURE COPPER WIRES (AMPOULE OF 40 g)
- 338.219.00 ANHYDRONE FOR H₂O TRAP (FLASK OF 100 g)
- 338.018.01 MOLECULAR SIEVE 3A FOR H₂O TRAP (FLASK OF 100 g)
- 338.222.00 QUARTZ WOOL (FLASK OF 5 g)
- 338.223.00 QUARTZ TURNINGS (FLASK OF 50 g)
- 338.375.30 CHROMOSORB W (FLASK OF 25 g)
for liquid samples adsorption
- 338.375.10 VANADIUM PENTOXIDE (FLASK OF 1 g)
additive for S analysis in organic samples

REAGENTS/CHEMICALS FOR NA 2000

N/PROTEIN DETERMINATION

- 338.219.00 ANHYDRONE (FLASK OF 100 g)
- 338.222.00 QUARTZ WOOL (FLASK OF 5 g)
- 338.223.00 QUARTZ TURNINGS (FLASK OF 50 g)
- 338.400.00 NA 2000 OXIDATION CATALYST (DOSE FOR 1 OXIDATION REACTOR)
- 338.353.00 REDUCED COPPER (FLASK OF 100 g)
- 338.352.30 NA 2000 SODA LIME (FLASK OF 200 g)
- 338.018.01 MOLECULAR SIEVE 3A (FLASK OF 100 g)
- 338.375.30 CHROMOSORB W WASHED (FLASK OF 25 g)
- 338.229.00 CHROMIUM OXIDE (FLASK OF 25 g)
- 338.228.00 COBALTOUS-COBALTIC OXIDE (FLASK OF 25 g)
- 338.217.10 COPPER OXIDE (FLASK OF 50 g)

ANALYTICAL STANDARDS

FISONS INSTRUMENTS offers a comprehensive range of high-purity standards to meet the stringent demands of users.

The nominal concentration value indicated on each standard is fully guaranteed.

		N %	C %	H %	O %	S %
338.367.00	ACETANILIDE (FLASK OF 2 g)	10.36	71.09	6.71	11.84	-
338.244.00	ATROPINE (FLASK OF 2 g)	4.84	70.56	8.01	-	-
338.352.10	BBOT STANDARD (FLASK OF 2 g) ¹	6.51	72.53	6.09	7.43	7.44
338.224.00	CYCLOHEXANONE 2-4 DNPH (FLASK OF 1 g) ²	20.14	51.79	5.07	23.00	-
338.234.00	DIPHENYL (FLASK OF 2 g)	-	93.46	6.54	-	-
338.354.30	IMIDAZOLE (FLASK OF 2 g)	41.15	52.92	5.92	-	-
338.251.00	SULPHANILAMIDE (FLASK OF 2 g)	16.27	41.84	4.68	18.58	18.62
338.375.20	"ENRICHED" PHENANTHRENE (FLASK OF 1 g) ³	0.2	93.8	5.6	-	0.4
338.352.40	LUBRICANT STANDARD (FLASK OF 2 g)	0.9	72.2	11.3	-	3.1
338.352.20	dl-METHIONINE ⁴ (FLASK OF 25 g)	9.39	-	-	-	-
338.225.00	BENZOIC ACID (FLASK OF 2 g)	-	68.85	4.95	26.20	-

¹ 2,5-Bis (5-tert-butyl-benzoxazol-2-yl) thiophene

² 2,4-dinitrophenylhydrazone

³ The theoretical values vary from batch to batch and will be specified on the label of each standard

⁴ Quoted for Nitrogen element only

CONVERSION KITS

The versatility of your equipment allows you to customize your configuration based on your analysis requirements by suitable conversion kits:

EA 1108

- 190.041.16 CONVERSION KIT FROM **CHN** TO **CHNS** DETERMINATION
- 190.041.17 CONVERSION KIT FROM **CHN** TO **CHN/O** DETERMINATION
- 190.041.18 CONVERSION KIT FROM **CHN** TO **CHNS/O** DETERMINATION
- 190.041.19 CONVERSION KIT FROM **CHN/O** TO **CHNS/O** DETERMINATION

NA 1500

- 190.041.29 CONVERSION KIT FROM **N** TO **NC** DETERMINATION
- 190.041.30 CONVERSION KIT FROM **N** OR **NC** TO **NCS** DETERMINATION

EA 1108 & NA 1500

- 190.041.28 KIT FOR ORGANIC CARBON (TOC) IN SOLID SAMPLES (SOILS, SEDIMENTS, ETC.)

THE KIT CONSISTS OF:

- 240.054.05 SILVER SAMPLE CONTAINER FOR SOLIDS (SET OF 100)
- 334.130.36 SAMPLE HOLDER PLATE
- 365.005.30 SYRINGE
- 354.600.17 ELECTRIC HEATER

ACCESSORIES FOR INTEGRATORS, RECORDERS AND COMPUTERS

POTENTIOMETRIC RECORDER

- 345.094.01 KIT OF CONSUMABLE PARTS FOR BUILT-IN POTENTIOMETRIC RECORDER consisting of:
 - 352.650.00 Z FOLD CHART (SET OF 10)
 - 352.651.00 PEN (SET OF 3)

DP200 DATA PROCESSOR

- 248.064.00 THERMAL CHART PAPER FOR PRINTER (SET OF 10 ROLLS)

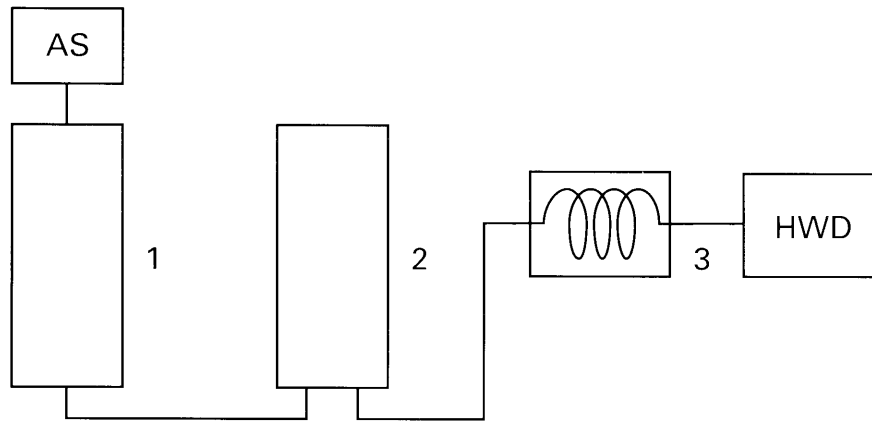
PRINTERS AND COMPUTERS

- 314.014.00 PAPER (SET OF 2000 SHEETS)
- 327.010.10 INK CARTRIDGE FOR EPSON LX 86
- 327.010.20 INK CARTRIDGE FOR EPSON FX 800
- 274.000.04 SINGLE ITEM BLANK DISKETTE 5 1/4"
- 274.000.07 SINGLE ITEM BLANK DISKETTE 3 1/4"

APPENDIX 1:

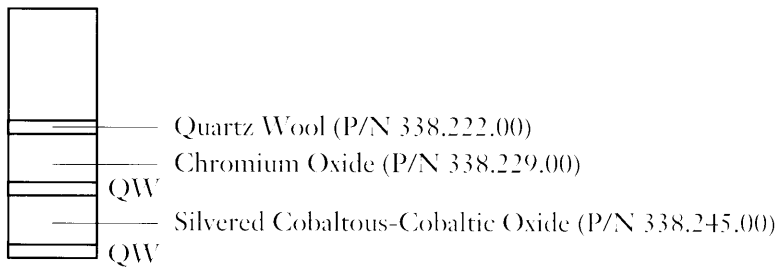
EA 1106 - CHN DETERMINATION

The parts required for the determination of CHN are summarized in the following schematic lay-out:

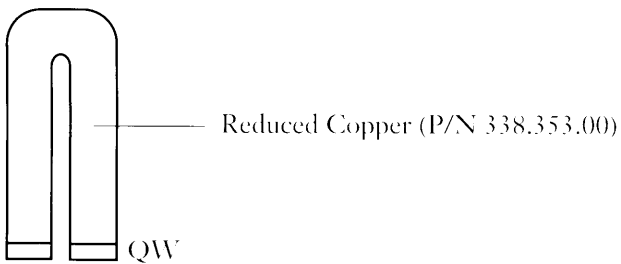


Where:

1: Combustion reactor



2: Reduction reactor



Combustion reactor (set of 2) (P/N 468.009.00)

Reduction reactor (set of 2) (P/N 468.010.00)

O-ring for reactor tubes (set of 10) (P/N 290.335.80)

O-ring for reactor tubes (set of 50) (P/N 290.505.67)

3: Packed column for CHN determination

2 m length, diameter 6 x 4 mm (P/N 260.082.00)

25 Years in Elemental Analysis