

Technical Information Bulletin

Copper Oxide for Inorganic Elemental Analysis

Elemental Microanalysis manufactures many different forms and grades of copper oxide for numerous different applications in Combustion Elemental Analysis, for example wires, chips and granules of different sizes and formulations. Each is optimised for use in a different application.

Copper oxide (CuO) is used extensively in elemental analysis for the oxidation of light hydrocarbons and carbon monoxide into carbon dioxide and of hydrogen into water.

Inorganic analysers, such as those manufactured by Leco®, Eltra® and Horiba® utilise quite different products to those required in Organic Elemental Analysis. Two reagents are used here:

Rare Earth Copper Oxide



Copper Oxide Coarse Chips



Rare Earth Copper Oxide

A number of instrument manufacturers offer a product termed “Rare Earth Copper Oxide”, or “Copper oxide – Rare Earth Base”.

Rare Earths are those elements positioned in the Lanthanides series of the Periodic table and find significant use due to their catalytic properties.

The oxides of two of these rare earth metals, namely cerium oxide (CeO₂) and lanthanum oxide (La₂O₃) when carefully incorporated into the formulation oxide produce a more reactive product and one that can achieve efficient conversion (oxidation) at a reduced temperature over copper oxide alone.

Elemental Microanalysis offer a rare earth copper oxide product – part no. B1123.

Copper Oxide Coarse Chips

This reagent is preferred in Eltra® Carbon/Sulphur analysers and consists of pure copper oxide in chip form. Elemental Microanalysis part number B1303.



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Available from your local Dealer:

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Copper Oxide for Inorganic Elemental Analysis continued

Summary of OEM part number Cross-References

Manufacturer	OEM Part Number	EMAL Part Number	C&S	ONH	C/H
Leco	501-170	B1123	Yes	Yes	Yes
Horiba	3 014 002 955	B1123		Yes	
Horiba	905.120.240.001	B1123		Yes	
Eltra	90289	B1123		Yes	
Eltra	90290	B1303	Yes		



EMAL Part Number	Description	Pack Size
B1123	Rare Earth Copper Oxide Granular 0.85 to 1.7mm 501-170	50g
B1303	Copper Oxide coarse chips 90290	100g

Leco®, Horiba® and Eltra® part numbers: The use of Leco®, Horiba® and Eltra® part numbers is intended for convenience only and does not imply that the products are of Leco®, Horiba® or Eltra® origin.

All Elemental Microanalysis products are guaranteed to be of high quality and suitable for use in the stated instrument. ®All trademarks acknowledged.