

Technical Information Bulletin

Technical Note

Glassy carbon tubes and ceramic outers as used in High Temperature furnace IRMS preparation systems

It has been reported that the highly expensive glassy carbon tubes used in these systems can be subjected to oxygen attack if installed in combination with a used ceramic outer.

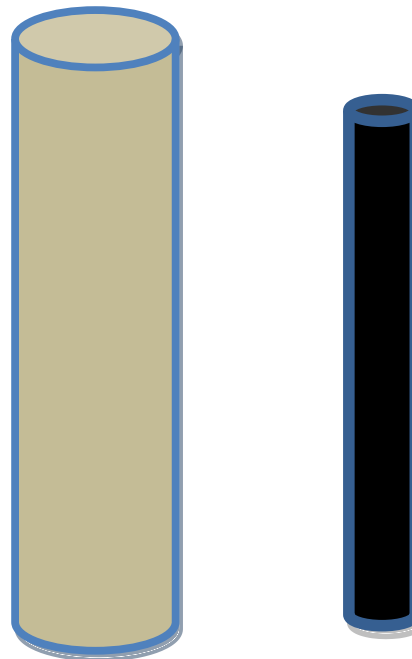
This may also be observed if the ceramic has been temperature cycled frequently. The effect has been attributed to micro fractures forming in the ceramic caused by aluminium and oxygen atoms of the structure becoming mobile at the elevated temperatures.

Visually, the tube appears unaffected.

To avoid this, it is recommended to change the (relatively inexpensive) outer ceramic whenever the glassy carbon tube is replaced.

Ceramic Outer

Glassy Carbon Inner



OEM	Analyser	Ceramic Part no.	Ceramic Dimensions (mm)	Glassy Carbon Part No.	Glassy Carbon Dimensions (mm)
Thermo	TC/EA	C1101	17 x 13 x 470	C7001	12 x 7 x 356
Thermo	Flash HT	C1105	17 x 13 x 450	C7001	12 x 7 x 356
Hekatech	HT-O	C1103	19 x 15 x 470	C7004	12 x 9 x 400
Eurovector	HT-pyrOH	C1102	17 x 13 x 450	C7004	12 x 9 x 400
Elementar	Pyrocube	C1106	30 x 23 x 387	C7017	18 x 14 x 432



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