



X-RAY ANODE COATING FOR SURFACE ANALYSIS

Torr Scientific offers a professional coating service for x-ray anodes used on all the major surface analysis instruments,

.....which is also fast and competitively priced !

We can coat both twin and monochromator anodes used on VG, Kratos, VSW, Leybold etc. instruments, using the usual materials Mg, Al, plus the more exotic such as Zirconium, Yttrium, Titanium, etc.

All work is conducted to the highest standards in an ISO 9000 approved company by people who have a strong background in surface analysis related instrumentation, and therefore understand the issues of cleanliness and contamination.



We use the latest sputter coating technologies to produce clean pure, dense, strongly adhering coatings, which are very rugged.

We offer several different levels of service

- a simple clean and recoat (to specified thickness) with Mg, Al etc.
- a more specialist recoat including a proprietary barrier layer for more recent instruments using higher powered / stressed anodes, or simply for older instruments to enhance anode lifetime
- a full re-tip, cathode replacement and rebuild
- a full replacement source for some instruments





Product Designation	Product Description
XRMAI (mono anode)	Mechanical and chemical cleaning followed by in situ sputter clean before sputter coating with Al to 10µm
XRMAIB (mono anode)	As XRMAL1 but with 100nm barrier layer beneath the Al
XRTAMgAl * (twin anode)	Mechanical and chemical cleaning followed by in situ sputter clean before sputter coating with Al to 10µm, and Mg to 10µm.
XRTAMgAlB * (twin anode)	As XRTAMgAl1 but with 100nm barrier layer beneath
XRTAMgZr * (twin anode)	Mechanical and chemical cleaning followed by in situ sputter clean before sputter coating with Zr to 10µm, and Mg to 10µm.
XRTAMgZr B* (twin anode)	As XRTAMgZr but with 100nm barrier layer beneath
XRTAMgY* (twin anode)	Mechanical and chemical cleaning followed by in situ sputter clean before sputter coating with Y to 10µm, and Mg to 10µm.
XRTAMgY B* (twin anode)	As XRTAMgY but with 100nm barrier layer beneath

*Note:-

- For twin anodes, cross contamination of anode material is guaranteed to be less than 0.1% - but the electron optics of some sources is such as to result in greater apparent cross-talk.
- With Mg anodes, every effort is made to minimise ghosts due to O α , but this will be function of the time the surface spends exposed to air; for this reason we recommend the use of inert gas filled shipping tubes (which we can provide at additional cost). In addition the ghost intensity will be a function of the Al window thickness since the window preferentially filters the softer O α x-ray line.
- Barrier layers prevent lower melting point Al/Cu / Mg/ Cu etc eutectics forming which limit power / lifetime. Such layers are essential for many modern anodes since they are integral to the design.
- Other permutations of anode material Al / Mg / Zr / Y / Ti are available on request.
- A full rebuild, including cleaning, cathodes & windows will be quoted for on an individual basis.

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