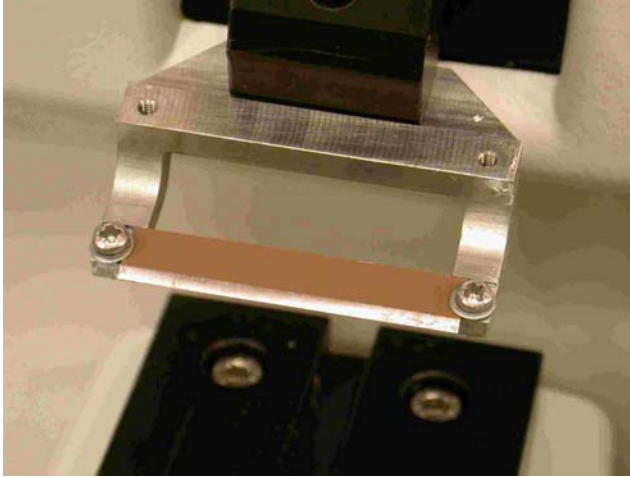


## Specialist Blade Technology for Campden Oscillating Microtomes

Ceramic Blade in Precision Titanium Holder



### The Importance of High Quality Blades

Whatever features and control an oscillating microtome possesses, the quality of the slice can be enhanced by good blades and degraded by poor blades.

The average razor blade consists of a triple bevelled on both faces on a thin foil of either carbon or stainless steel. The triple bevel terminates in a relatively non-acute angle and the very thin foil will almost certainly flex when clamped into a blade holder. For these reasons razor blades are not recommended for tissue slices.

Carbon steel is relatively hard compared to stainless steel and thus will keep its cutting edge longer however it also has the inherent disadvantage that it will rust quickly when exposed to air. To prevent rusting in storage all carbon steel blades have a film of oil, which first needs to be removed, before the blade can be used. The corrosion process is, of course, accelerated significantly in a.c.s.f. saline.

For these reasons normal razor blades and carbon steel are not recommended for precision tissue sectioning.

### Campden Instruments Blade Technology

Campden Instruments supplies two types of blade for all its Integraslice and Vibroslice oscillating Microtomes. These have a special blade holder to ensure accurate mounting and orientation.

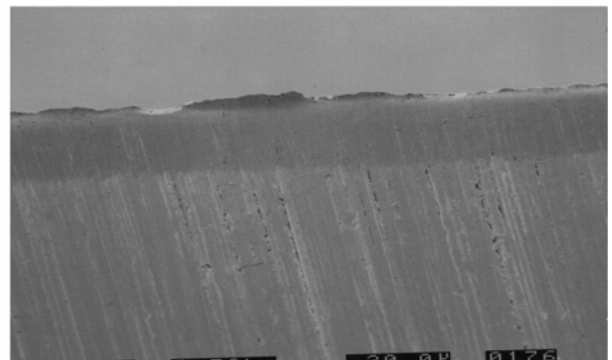
Model 752/1 & 7550/1/SS Stainless Steel Blades. These are double bevelled on both faces, honed to an acute cutting edge. Because of the relative softness of stainless steel it is recommended that these blades be used once only.

Model 7551/C Ceramic Blades. Made from ultra hard zirconium, this material that can be honed to the finest of edges, the body of the blade can also be thinner than a metal whilst still remaining rigid and hence a straight cutting edge. The result is that slice quality is substantially improved with prolonged slice life especially in the most difficult of tissues such as young brain where structures are yet to form or very old brain with build up of extracellular proteins and added structures. Additionally the blade has a much longer life due to the ultra hard cutting edge not losing its sharpness and being impervious to corrosion.

For studies where the deposition of metal into the slice would have undesirable effects the benefit of ceramic blades is obvious.

Ceramic blades are cost effective, the initial higher cost being offset by its longevity.

Metal Blade edge at high magnification,  
undesirable burrs are easily seen.



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