

Leica Vibratome Series



Cutting Edge Precision

Vibrating blade microtomes are used to produce monolayer or thick sections of fixed or fresh tissue under physiological conditions without freezing or embedding. Sectioning fresh tissue specimens with Leica Microsystems' VT Series maintains the morphology, enzyme activity and cell viability of the tissue. Their use also minimizes artifacts, compression distortion, cell destruction and other inherent deleterious effects of sectioning. Freezing fractures cell membranes, and there is a loss of cytosol. This is avoided by Vibratome sectioning, so that immune or other staining of cellular free cytosol proteins is much more vivid with Vibratome cut sections. This includes natural proteins, and HRP and other markers. Other applications include cell culturing of different organs, sections for patch clamping, electrophysiology, free floating sections and many other applications in neuroscience.

In order to maintain physiological conditions while sectioning, chill the buffer and minimize the vertical deflection of the blade holder as well as the blade. During operation, the blade moves laterally and forward and the section thickness is achieved by vertically feeding the specimen stage. Other parameters including section thickness, amplitude, frequency, knife travel speed and blade angle influence section quality.

The Leica Vibratome Series of instruments offers a complete product range that controls some or all of these parameters. The features of each instrument vary in the degree of automation, ranging from the Leica VT1000 P to the fully automated Leica VT1200 S with optional Vibrocheck, for measuring and minimizing vertical blade deflection.



Leica VT1000 P
(formerly Vibratome 1000 Plus):
The economic solution for accurate and repeatable sections



Leica VT1000 A
(formerly Vibratome 1500):
Spend less time cutting with automated sectioning



Leica VT1000 S:
Maintain physiological conditions for more viable slices



Leica VT1200:
Retain viable cells even at the section surface



Leica VT1200 S:
Ultimate precision and automation for the most critical specimens



Leica Vibratomes have been developed in collaboration with renowned scientists throughout the world and suit every researcher's application.