



VIBRATION-FREE, MAGNETICALLY
COUPLED BEVELING SURFACE

ABRASIVE SURFACE OPTICALLY
FLAT TO A HALF WAVE (250nm)

FINEST ABRASIVE SURFACE
COMMERCIALY AVAILABLE

SYNCHRONOUS CLOCK MOTOR
INSURES STABLE ROTATION RATE

7 POUND STEEL BASEPLATE
ADDS ADDITIONAL DAMPENING

INTEGRATED LED LAMP

ROBUST MICROMANIPULATOR
CONTROLS BEVEL ANGLE
AND ADVANCEMENT



BV-10 MICROELECTRODE BEVELER

Elegant and simple to use, the **BV-10** offers precision beveling of micropipette tips between 0.1 and 100 μ m. The unique abrasive plate drive system is vibration free for greater control of the beveling process. Beveling can be accomplished very rapidly and produces consistent tip diameters using the techniques as described by Brown and Flaming, Science, August 1974, Vol. 185.

Intracellular recording electrodes can benefit from beveling because of 1) a reduction in the tip diameter by creation of the sharp point on the electrode and 2) a lowered electrical resistance of the electrode due to the larger cross sectional area of the lumen. This greatly facilitates penetrating and holding very small or difficult cells. Microinjection needles also benefit from beveling by promoting entry into cells with minimal damage while at the same time enhancing the flow of material through the needle.

The basic beveling system consists of a stationary pedestal, optically flat to a half wave (250nm), surface mounted on a heavy baseplate. This serves as a bearing for an abrasive coated glass grinding plate, which is also flat to half a wave. The flat abrasive plate is coupled to a low vibration, slow-speed motor by means of magnetic fields to provide a wobble-free flat grinding surface. The abrasive plates are fabricated with a proprietary process which insures a consistent abrasive coating.

A 2-axis micromanipulator holds the pipette to be beveled and permits controlled advancement onto the abrasive surface. The bevel angle and speed of advancement are adjustable. An integrated LED lamp with a gooseneck enhances the beveling operation by providing sharp illumination of the abrasive plate and pipette.

The basic system comes with two abrasive plates of your choice, a wick with holder (for wet beveling), pedestal oil, degreasing fluid, and manual.

- BV-10-B¹** Micropipette beveler basic system
- BV-10-C** BV-10-B with electrode impedance meter
- BV-10-D** BV-10-B with 80X stereo microscope
- BV-10-E** BV-10-B with impedance meter and 80X stereo microscope

¹ Includes micromanipulator, reference wick, reference wick holder, pedestal oil, degreaser, manual, and two abrasive plates of your choice.



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