

INSTRUCTIONS FOR USE

SPENCER No. 829 ADAPTER

FOR ULTRATHIN SECTIONS

The No. 829 Adapter is designed to be used only on the No. 820 Spencer Precision Rotary Microtome for cutting very thin sections.

THE FOLLOWING PRECAUTIONS should be practiced when using the adapter:

1. If your microtome has a wooden rack inside for holding extra knives and backs, remove it by loosening two screws from the bottom of the instrument. Place microtome near edge of table to do this, do not turn on side or upside down.
2. Before attaching the adapter, remove all grease and dirt from its plane surface with a solvent.
3. Turn the microtome feed screw tip back almost to the starting position, and push the inclined plane forward.
4. Insert the adapter between the tip and the inclined plane so that its smooth surface is toward the tip. Adjust the two leveling screws (with lock nuts) at the top of the adapter so that the weight of the adapter rests on the ends of both screws.
5. Tighten gently the large clamping screw of the adapter, applying only enough tension to hold the adapter securely. Excess tension on this screw will tend to bind the horizontal slide-ways, and forward motion of the object will be uneven or will cease entirely.

PROPER LUBRICATION OF PRIME IMPORTANCE !!

6. When in place, lubricate the entire plane surface of the adapter with PIKE OIL (furnished with the microtome). This surface must be well coated with pike oil at all times. Use enough oil so that it will flow over the surface, rather than form a thin film.

DO NOT MAKE A SECOND EXCURSION OVER ANY PART OF THE PLANE SURFACE OF THE ADAPTER UNTIL THE SURFACE IS AGAIN WIPED OFF AND FRESH PIKE OIL APPLIED.

7. Adjust the two leveling screws mentioned in Step 4, one with respect to the other, so that there is no inward or outward movement of the specimen block during the cutting stroke. An ideal method of accomplishing this is by using a dial gauge which measures to 0.0001" with a suitable extension which will contact the surface of the adapter as it moves up and down. There should be no variation in the gauge reading as the adapter moves through one complete oscillation. Another method suitable for starting is to draw a pencil line across the adapter surface (before placing the adapter in the microtome) which is exactly perpendicular to the top edge of the adapter. With the adapter properly leveled, the feed screw tip should follow this pencil line exactly as the adapter moves up and down. If the tip moves away from the line in either direction, the adapter is not level. When leveling has been accomplished, tighten the lock nuts on the two screws.
8. Set the feed mechanism dial of the microtome at 1 in order to feed ultrathin sections of 0.05 to 0.10 micron thickness.
9. When using an older model of the No. 820 microtome, care should be taken that the feed screw tip does not run over the edge of the adapter, as this will damage the point.
10. During storage the adapter may be protected by any suitable rust inhibiting lubricant.

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