# Krumdieck Live Tissue Microtome


ALABAMA
RESEARCH &
DEVELOPMENT

## Krumdieck Live Tissue Microtome


Alabama Research and Development is proud to announce our completely redesigned Tissue Slicer to rapidly prepare aseptic, thin slices of live tissues for biochemical, pharmacological, toxicological, neurological, and other in vitro studies. Our latest design has many improvements that make it more user friendly with a host of new features that enable the end user to concentrate more on their experiments rather than machine operation.

**Advanced Features:**

- New cabinet design with state-of-the-art DC electronic upgrades.
- Improved microtome assembly with magnetic blade holder.
- Reengineered shorter counter-balanced drive shaft for smoother blade travel.
- Independent speed controls for both reciprocating arm and blade motor.
- Fully automatic - only commercially available sterilizable microtome.

**Advantages:**

- Easy to use - no technical expertise required.
- Electronic Key Pad replaces manual switches and dials.
- Fewer moving parts providing consistent results with less adjustments.

## Tissue Coring Press

Alabama Research and Development has designed a new Tissue Coring Press to be used to prepare live cylindrical tissue cores for use in the Krumdieck Live Tissue Microtome.

This easy-to-use unit sits on a 6" x 6" granite base and is 12" H x 8" D. The new design incorporates a DC motor (no more batteries to be concerned with) coupled with an integrated precision gear-head. Just plug in the unit, turn on the switch and you are ready to make cores.

The coring press is designed to be used with our coring tools ranging in size from 3 mm to 10 mm.

**New Features:**

- Fewer moving parts with lever controlled “push-down” handle.
- Quick “twist-release” chuck (no wrenches required).
- New chuck eliminates side wobble experienced with set-screw models.
- LED lighted “on / off” push button switch.

**Advantages:**

- Eliminates the need for skillful operators to cut cores free hand.
- Ensures obtaining reproducible cores.
- Minimum training time needed for technicians to obtain high quality cores.

## Tissue Coring Tools

Our new improved coring tools are used for cutting cylindrical live tissue cores for use in the Krumdieck Live Tissue Microtome. Thin wall stainless steel tubing used in other coring tools does not hold an edge well and is difficult to sharpen. The new coring tools are made from heat-treated, knife-quality stainless steel. The cutting edge angles are designed to give sharp, well-formed tissue cores which is important for use in the Krumdieck Live Tissue Microtome. With proper handling, the coring tools should more than triple the life of the older tools. The tools can be used either as hand-held tools or with the tissue coring press. The coring tools are available in four standard sizes: 3mm, 5mm, 8mm, and 10mm.

## Tissue Embedding Unit

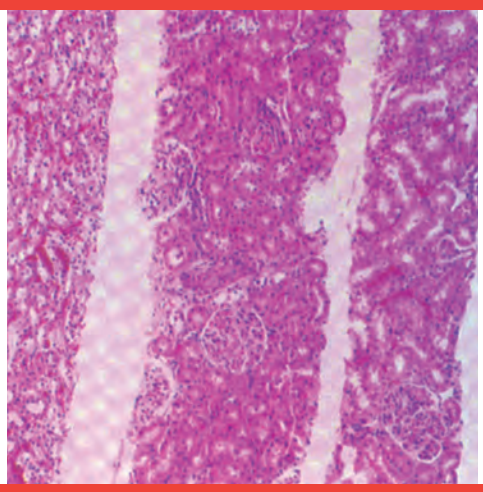
The Tissue Embedding Unit is used to prepare tissue samples for slicing by fully encasing them in an agarose gel. The gel, which does not adhere to the tissues, easily separates from them after slicing. Sectioning agarose embedded samples significantly improves the quality of the slices. Thinner slices of very reproducible dimensions are easily obtained. Embedding widens the scope of tissue samples that can be sectioned by the Krumdieck Live Tissue Microtome by:

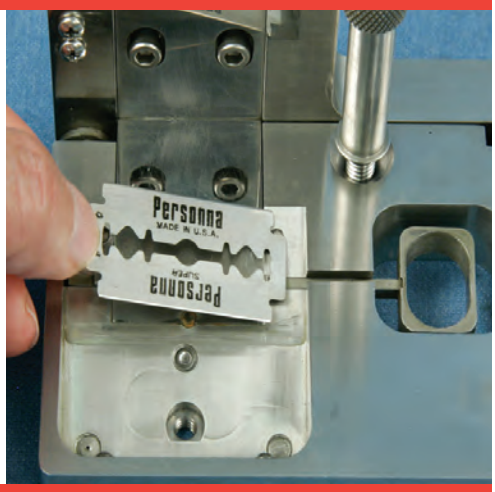
- eliminating the need to make cylindrical cores.
- allowing the use of small tissue samples or organs (e.g., rat adrenal, pituitary).
- allowing the use of irregularly shaped tissue samples.
- providing better support of tissue during slicing.
- allowing orientation of the sample to facilitate sequential slicing.
- providing better quality slices.

## Incubation Unit

Alabama R&D's Incubation Unit has been designed to provide optimal oxygenation and nutrient delivery to tissue slices in organ culture and to minimize damage and facilitate handling of the slices during preparation.
Slices are easily loaded onto specially designed titanium screen holders by a tissue slice loader that eliminates the use of slice-damaging forceps or spatulas. The loaded slice holders are transferred to standard tissue culture six-well plates which are rotated (1 rpm) on an inclined plane to alternately expose the slices to the atmosphere of the tissue culture incubator or dip them in the culture medium.

- Reusable autoclavable titanium screen slice supports in delrin holders (biologically inert).
- Fast, easy, non-damaging loading of slices onto their supports using AR&D Tissue Slice Loader.
- Uses standard tissue culture six-well plates. Up to 24 plates (144 wells) per run.
- Alternate exposure of slices to atmosphere and culture medium.
- Inclined rotator fits inside most tissue culture incubators (15" x 15" x 15" or larger).






**ALABAMA RESEARCH & DEVELOPMENT**

*A Division of Alabama Specialty Products, Inc.*
P.O. Box 739 • 152 Metal Samples Rd.
Munford, AL 36268

Phone: (256) 358-0460
Fax: (256) 358-4515
E-mail: ard@alspi.com

***www.tissueslicer.com***