



Braintree Scientific INC.
1986 Catalog

DeltaphaseTM Isothermal Pad

a breakthrough in surgical temperature control

Based on fundamental thermodynamics, completely safe even with flammable gases, uses no electricity, no wires, no control box.

Background

Normal physiologic function is based on a body temperature of 37°C (98.6°F). In normal, conscious animals many systems act to generate and retain heat, keeping core temperature in the normal range. Anesthesia blocks those natural mechanisms, so that heat is lost and body temperature falls. Normal function is disturbed. Surgical tolerance is reduced. Recovery is slowed. To help maintain body temperature during surgical or experimental procedures, or to assist in recovery, many methods have been tried. Coverings or blankets, for example, slow heat loss significantly. However, such coverings are impractical during surgery, and they cannot replace heat already lost. Electrical heaters are often used. These take the form of heating pads, heated operating tables, or infrared lamps. Such devices can replace lost heat, and with appropriate controlling electronics can maintain body temperature very well. However, such electrical systems are often failure prone and may be dangerous. They often interfere with sensitive electronic recording equipment. In the presence of physiological solutions, urine or blood, they present a shock hazard. And the opening spark of a thermostat or switch may ignite a flammable anesthetic (such as ether) and cause an explosion.

The **DeltaphaseTM Isothermal Pad** is a new approach to body temperature stabilization. It acts as a source of heat, but cannot overheat. Its constant temperature is based on a thermodynamic principle and needs no electricity or wires, no thermostat or



feedback controller. It cannot generate electrical signals or cause interference. It cannot trigger an explosion. It can maintain a small animal at near normal and constant temperature for several hours.

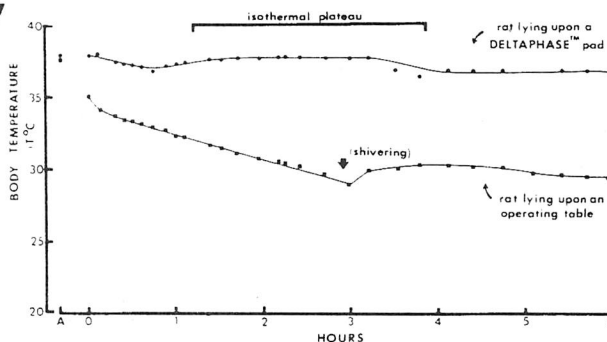
The **DeltaphaseTM Isothermal Pad** is based on the thermodynamic principle that a heat-releasing phase change occurs at constant temperature. A unique chemical solution is contained within a durable pouch. At room temperature this solution is in solid form. When heated, the solution becomes fluid. The pad is now activated and ready for use.

When an animal (or any cooler object) is placed in contact with the activated pad, heat leaves the solution as it undergoes a phase change back to the solid form. In this phase change, over 30 calories of heat are released per gram of solution, even though the temperature is constant, near 37°C. The pad remains isothermal until all the liquid phase has solidified. Only then does its temperature fall.

| Model | Price |
|---------------------------------------------|---------|
| 39 DP (Includes 3 Pads and 3 Insulators) | \$48.50 |

Laboratory Evaluation

Rectal temperatures of two rats during 6-hour experiment. (Animal weights 350 g, room temperature 24.5°C.) Animal on **DeltaphaseTM Pad** maintained near normal temperature for more than three hours.



The **DeltaphaseTM Isothermal Pad** has been evaluated by researchers at a major medical center. Anesthetized rats (pentobarbital 45 mg/kg) were placed on either an operating table or a **DeltaphaseTM Pad**, and rectal temperature was monitored for 6 hours. The temperature of the rats on the

conventional table fell rapidly and stabilized only near 30°C when pronounced shivering began. The rats on **DeltaphaseTM Pads** maintained body temperature near a constant 37°C for 4 hours. Typical observations are shown in Figure 2.

Metal Mesh Gloves for handling lab animals

Protect your hands from teeth and claws when handling small animals.

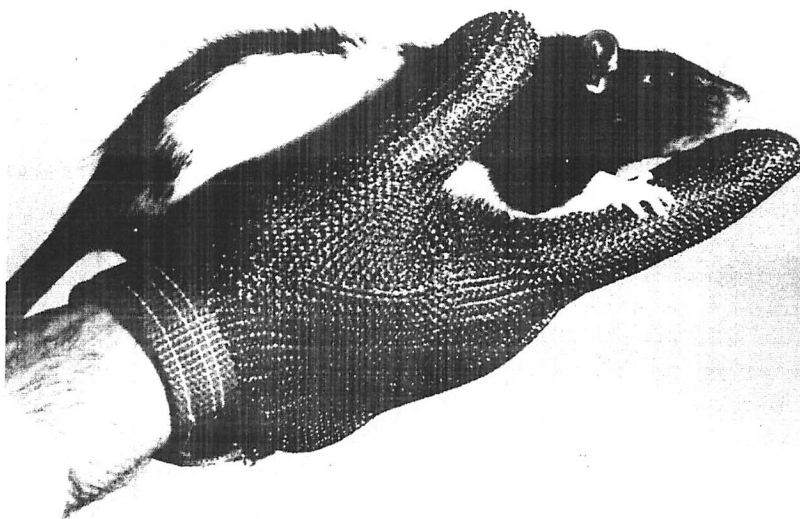
Braintree Scientific's Metal Mesh Gloves provide security and a sure grip. This is the original and only Metal Mesh Glove for rodent handling.

Experience shows that animals are easier to control when handlers are relaxed and confident. Much better than leather since metal mesh is more flexible, is readily cleaned, won't stain or corrode and doesn't carry odors.

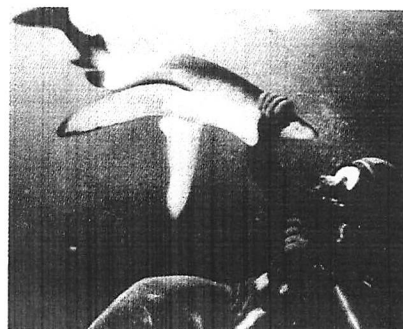
These gloves may be worn over surgical gloves, if desired. Adjustable Velcro® wrist band prevents slipping. Convert right to left and vice versa by turning inside out. Order by size, men's or women's, and left or right hand.

YES! You have seen this material used for anti-shark suits.

Do not be fooled by imitations.



| MODEL | Price |
|-------------------------------------------------------------------------------------------------------------|-----------------|
| MMG-100 | \$79.50 |
| ALSO AVAILABLE: (Not shown) | |
| D-933 | \$126.00 |
| Glove with Forearm Gauntlet. | |
| D-588 | \$145.00 |
| Stainless Steel Sleeve Armguard and Harness (wrist to shoulder). Sizes S, M, L. Specify left or right hand. | |



Animal Surgery

To maintain animal body temperature during surgical or experimental procedures,

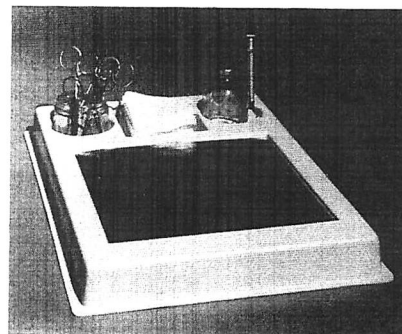
and to hasten post-surgical recovery, simply place animal on activated pad, or use Deltaphase™ Operating Board. (Below) Pad is pre-set to maintain temperature of 37°C.

Deltaphase™ operating board

Researchers have asked for a small animal operating table incorporating the Deltaphase™ principle. This compact but stable board includes a metal-topped insulated chamber to hold an activated pad, and has pre-molded wells for sponges, instruments or anesthetic apparatus.

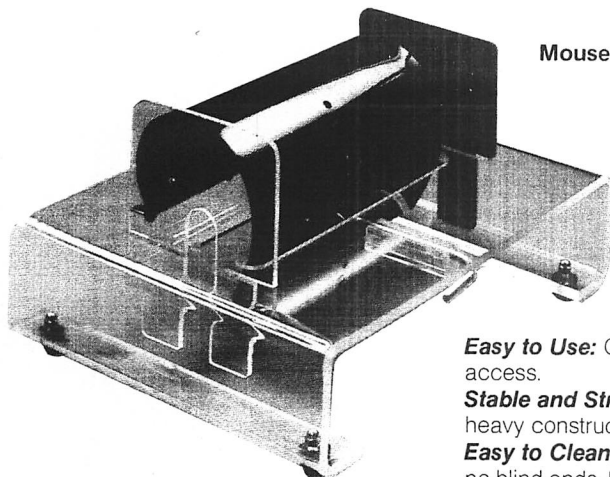
Designed by research scientists, it is durable and easy to clean. Inexpensive enough to make temperature control available even in student labs. Comes complete with two Deltaphase™ pads for 37°C stabilization.

| MODEL | Price |
|--------------|----------------|
| 39 OP | \$59.50 |



Instruments Shown Not Included.

Rat experiments are easier with this universal rat restrainer



Mouse restrainer now available!

FEATURING:
Unique Spiral Grip
Optional Calibrated
Watering System

Easy to Use: Complete experimental access.

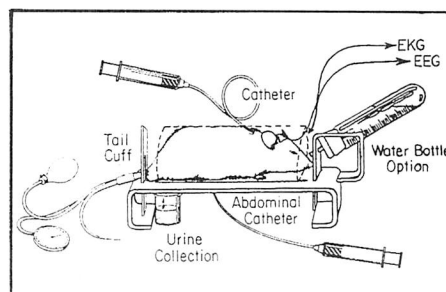
Stable and Strong: Stands up to daily use, heavy construction.

Easy to Clean: Opens fully, won't corrode, no blind ends. Made of plastic and stainless steel.

Improved Technique: Save time and effort whenever you handle laboratory rats. Have both hands free. Relax and avoid accidents, knowing your animals are gently but firmly restrained.

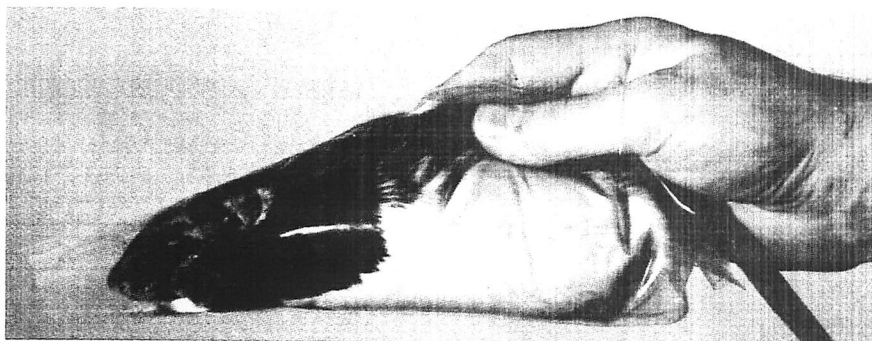
Adjustable: Holds rats of all sizes. Makes single-sized restrainers obsolete.

Non-Stress: Gentle, but secure. Rats cannot turn or escape, natural posture maintained.



| Model | Price |
|----------------------------------------------------------------|-----------------|
| 500M Mouse Restrainer. | \$86.50 |
| 700R Rat Restrainer. | \$105.00 |
| 800R Rat Restrainer with calibrated watering system. | \$122.00 |

DecapiCones™



Anesthesia and decapitation are easier with Braintree Scientific, Inc. DecapiCones™. They provide quick and easy restraint of rats in tapered tubes. I.P. injections are made directly through the plastic film. Restrains post-decapitation kicking. Prevents contact of feces and urine with hands. Recommended for use with Braintree Scientific Small Animal Decapitator.

These plastic film cones are the most economical and simplest rodent restrainers available. When the large end is held closed

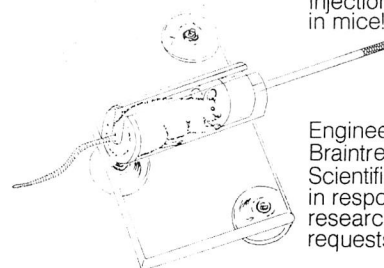
the animal is squeezed into the tapered end, and can breathe through the small opening. May be used repeatedly, simply discard when soiled.

Unique dispenser holds DecapiCones™ open and ready to use.

| Model | Price |
|------------------------------------------------------------------------------|----------------|
| DC-200 (Includes: 4 Dispensers, 50 Bags each) (Total 200 cones) | \$48.00 |

Tailveiner™

For faster
tail vein
injection
in mice!



Engineered by
Braintree
Scientific
in response to
researcher's
requests.

The TAILVEINER™ is the first easy to use mouse restrainer specifically designed for tail vein injections. The slotted tube permits the mouse to be quickly pulled in by the tail. The animal is then restrained by a tapered plug which slides easily to accommodate any size mouse, but locks automatically when the handle is released. After dosing, the handle is lifted and the plug is easily removed. The TAILVEINER™ is the fastest restrainer yet for intravenous injections in mice. Try it!

| Model | Price |
|---------------|----------------|
| TV-150 | \$28.00 |

Rat ECU™

Individual Rat Experimental Containment Unit

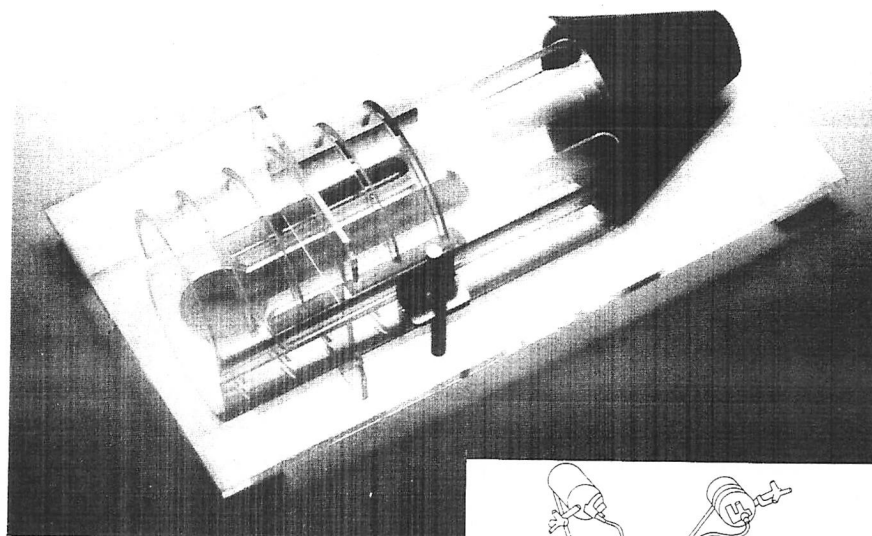
BRAINTREE SCIENTIFIC Rat ECU™ is a new concept in small rodent experimental research.

The Rat ECU provides comfortable containment of experimental animals to facilitate repeated measurements of physiological and pharmacological parameters. NOT A RESTRAINER: rats are pre-conditioned (trained) to accept appropriate periods of confinement in the ECU. Blood pressure, clearance, and metabolism studies are better and easier using Rat ECU's.

Introduction

Recent years have witnessed rapid growth in demand for new techniques with which to make experimental measurements in conscious rats, without the artifacts associated with surgery or anesthetic agents. In general, increased sophistication of the technique selected is associated with increased complexity, cost and maintenance effort.

Many investigators desire a system allowing flexibility to measure physiological parameters (blood pressure, heart rate, organ blood flow, and electrical signals) while sampling one or more biological fluids (plasma, urine, CSF) or while administering drugs or test substances. These investigators do not wish to take on the costs and complexities of jackets, swivels, or telemetry. The Braintree Scientific Rat ECU is a time-tested technology which, when combined with appropriate chronic catheter technology, facilitates chronic blood pressure, cardiac output, organ blood flow, clearance, drug metabolism, and endocrinology studies (to name only a few) using conscious rats.

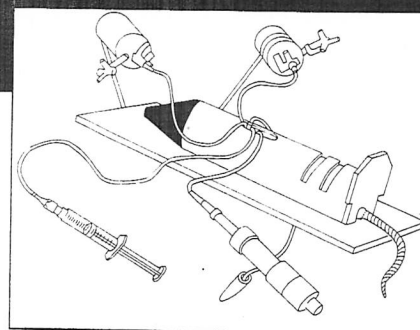


Description

The Braintree Scientific Rat ECU consists of a molded plexiglass canopy hinged to a plexiglass base. The canopy has a tapered opaque plastic hood to protect the rat from visual disturbances. Multiple slots and an end plate allow adjustment of the canopy length for rat size and easy access to dorsal catheters and electrical leads. The base has a large through-drilled slot for accessing ventral catheters, feces and urine. Four comfortable slots are provided to support the feet.

The Braintree Scientific ECU is set up in position with the required equipment. The rat is placed in the ECU and the catheters and leads connected to the appropriate devices. The Braintree Scientific Rat ECU has been used for studies of anti-hypertensive drugs; development of hypertension as a function of age, renal and drug clearance studies, metabolism studies, and endocrinological studies. (A list of publications is provided upon request).

The Braintree Scientific Rat ECU is not a restrainer. ECU units are tailored for different sizes of rats as a function of body weight.



Conditioning

For the best results rats should be conditioned to appropriate periods of confinement in the Braintree Scientific Rat ECU. This is easily achieved by introducing animals to the ECU daily for increasing periods of time.

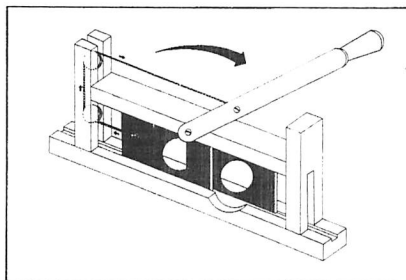
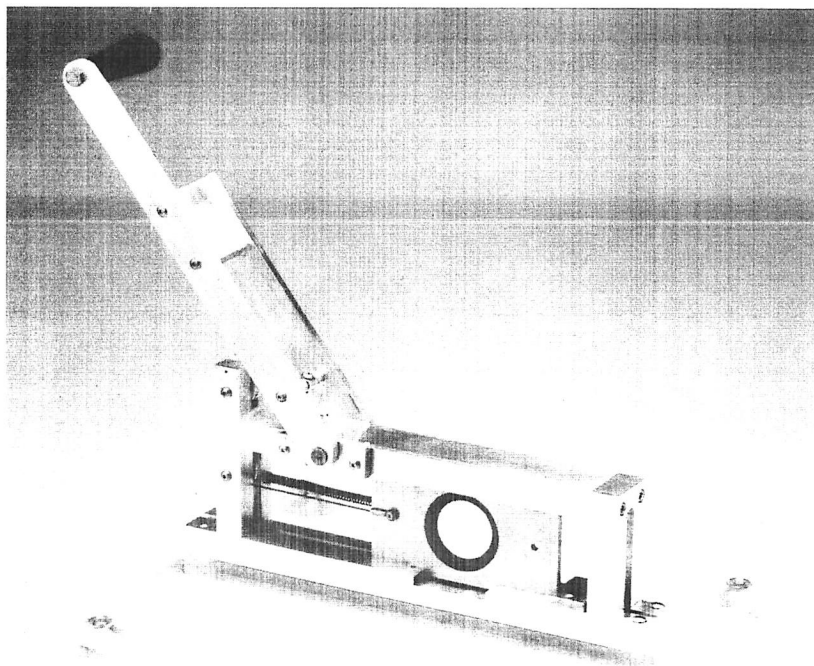
| Models | Price |
|----------------------------------|-----------------|
| G-1 (50 to 120 grams) | \$105.00 |
| G-2 (120 to 250 grams) | \$105.00 |
| G-3 (250 to 350 grams) | \$105.00 |
| G-4 (350 to 400 grams) | \$105.00 |

The Braintree Scientific Small Animal Decapitator

Introduction

The Braintree Scientific Small Animal Decapitator is the first decapitator specifically designed for improved safety and cutting precision. Conventional "Guillotines" do not cut cleanly, jam, and represent an unacceptable safety hazard. The blade design of conventional units interferes with the collection of trunk blood.

The advanced design of the Braintree Scientific Small Animal Decapitator eliminates the problems and unacceptable safety hazards associated with conventional guillotines. The unique circular blade design delivers jam proof precision cutting while almost eliminating the possibility of operator injury. The sliding blade clears the fixed blade at the end of the cutting stroke, facilitating the collection of trunk blood. The lever/pulley mechanism was designed to provide plenty of cutting power. Used with our DecapiCones™ (see page 4,) this small animal decapitator will serve your laboratory needs, substantially improve laboratory efficiency, and better protect laboratory personnel.



Features

- Advanced design
- Improved safety features
- Precision cutting instrument
- Facilitates collection of trunk blood
- Compact construction for easy maintenance
- For added safety and convenience use with DecapiCones™

1st Advance in 25 Years!

**It cuts better
and smoother
than a
guillotine.**

Mechanism

The cutting mechanism of the Braintree Scientific Small Animal Decapitator consists of 2 hollow ground, circular (1½" or 2" diameter), hardened chromium steel blades. One blade is fixed in the frame providing support and a fixed cutting edge. Upon activation of the lever/pulley, the second blade slides past the fixed blade sweeping the cut tissue aside and clearing the blade opening to facilitate collection of trunk blood. (See Fig. 2). This unique blade design greatly reduces the possibility of operator injury. The blades are easily removed for cleaning or replacement. Braintree Scientific scientists recommend use of DecapiCones™ with all types of decapitators for added safety and personal protection.

Accessories

Oversized Base

The Braintree Scientific Small Animal Decapitator is sold ready to mount to whatever counter or table you have available. For those requiring a free standing mobile decapitator we offer an oversized lucite base. The base is 14"x14"x½" and is pre-drilled. Oversized suction cups will firmly adhere this base to almost any surface.

Replacement Blades

Replacement blades are available for the Small Animal Decapitator. With normal use and maintenance the original blades should last indefinitely. Should blades become damaged, however, replacements are available. Do not ship old blades to Braintree Scientific.

Lubricating/Protective Oil

Braintree Scientific supplies one can of lubricating oil with each Small Animal Decapitator. This oil is required to lubricate and protect this precision cutting instrument. The oil contains no electrolytes or cholesterol.

Caution

The Braintree Scientific Small Animal Decapitator should be used only by qualified laboratory personnel. We recommend the use of DecapiCones™ for precision animal handling, increased operator control, and to further reduce the possibility of accidental operator injury.

Warranty

Your unconditional satisfaction is guaranteed.

| Model | Price |
|---------------------------------------------------------------------------------------------|-----------------|
| AD-150 Small Animal Decapitor (includes spray container of lubricating oil) | \$450.00 |
| AD-160 Small Animal Decapitator with 14"x14" Lucite Base (plus oil) | \$499.00 |
| Accessories | |
| AD Base 14"x14" Lucite Base | \$49.00 |
| AD Extra Blades Two 1½" I.D. Blades | \$140.00 |
| AD Extra Blades Two 2" I.D. Blades | \$140.00 |
| AD Extra Cable One Replacement Cable | \$15.00 |

Micro-Renathane® Implantation Tubing

A Major Advance in Chronic Catheter Technique

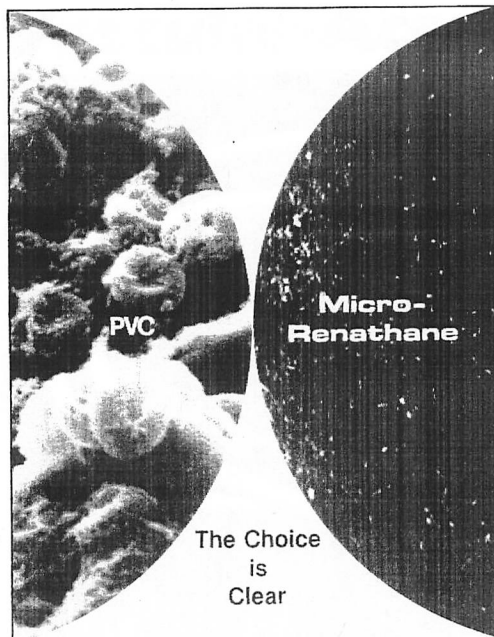
Polyurethane Catheter Tubing

Braintree Scientific is proud to present a major advance in chronic catheter material. In our opinion, **Micro-Renathane®** is the most blood-compatible tubing ever made. For implantation studies in experimental animals this new tubing offers extended catheter life and reduces the probability of intravascular thrombosis.

The scanning electron micrographs (approx. 10,000X) above illustrate the dramatic difference between Renathane tubing and conventional vinyl tubing. After use in hemodialysis, Renathane showed significantly less surface deposits of platelets, proteins, trapped red cells and other blood elements than other tubings.

"Medical Grade" Plastics

It is appropriate to clarify the definition of the phrases "medical grade" plastic and "FDA approved" plastic. There is no approved "medical grade" plastic or resin. Each individual supplier has his own criteria for what polymer and additive combinations constitute suitability for medical use. Similarly, there is no "FDA approved" plastic or resin. In the Code of Federal Regulations, Food and Drugs, Title 21, Part 121, the FDA has listed the additives allowable in plastics intended for food contact use. In formulating a PVC compound for medical use the



manufacturer generally chooses plasticizers, stabilizers, antioxidants, colorants, etc. which are acceptable for food use. Unfortunately, there are currently no regulatory guidelines concerning materials used in medical devices.

Micro-Renathane® does not contain any plasticizers.

Medical Uses of Polyurethane

Polyurethane based polymers are relatively new materials introduced into the United States some 25 years ago from Germany. Early biomedical applications of polyurethanes were described by Boretos and Pierce. They reported excellent vascular acceptability in experimental heart-assist pump chambers and arterial cannulae. In subsequent work Boretos reported the absence of acute toxicity for segmented polyurethanes. He also reported that polyurethane rings did not deteriorate or cause tissue reaction after implantation for 18 months. Lyman and coworkers have also investigated polyurethanes for the fabrication of heart assist devices. Artificial heart devices were constructed of this material and implanted in calves. Other uses of polyurethanes as biomaterials have been described by Bruck. Polyurethane based polymers are currently commercially employed in hollow fiber kidneys, vascular

Researchers are using Renathane™ at:

Texas A&M Research Center
Duke University
Harvard University
University of North Carolina
Dartmouth College
University of Arizona
Walter Reed Medical Center
Iowa State University
John Hopkins University
Oregon Health Sci. University
Virginia Commonwealth University
University of Texas
Medical College of Wisconsin
Wright Patterson AFB
National Institute of Health
Howard University
University of Tennessee
Northeastern University
University of Minnesota
University of Chicago
University of New Hampshire
Montana State University
University of Kansas Med. Center

This is only a partial list! No institutional endorsement is implied.

chatheters and intra-aortic balloons. Due to the slightly higher costs of polyurethanes, they have only been used where exceptional biologic and blood compatibility is required.

Micro-Renathane® is sold only for experimental use in laboratory animals. Please contact us for information on other applications.

A brief report, with references, is included with each shipment of **Micro-Renathane®**. We will be pleased to send a copy upon request.

References

- Boretos, J.W. and Pierce, W.S., J. Biomed. Mater. Res., 2, 121 (1968).
Boretos, J.W., Detmer, D.E. and Donachy, J.H., J. Biomed. Mater. Res., 5, 373 (1971).
Lyman, D.J., Kwan-Gett, C., Zwart, H.H.J., Bland, A., Eastwood, N., Kawai, J., and Kolff, W.J., Trans. Amer. Soc. Art. Int. Organs., 15, 456 (1971).
Bruck, S.D., Rabin, S., and Ferguson, R.J., Biomat., Med. Dev., Art. Org., 1, 191 (1973).
Bruck, S., ibid., 1, 70 (1973).

Available in the following sizes:

| Type | Size |
|---------------------------------------|-----------------------|
| MRE 040 | .040 O.D. x .025 I.D. |
| MRE 080 | .080 O.D. x .040 I.D. |
| MRE 095 | .095 O.D. x .066 I.D. |
| MRE 160 | .160 O.D. x .091 I.D. |
| MRE COMBO | 3 Lengths each size |
| Kit of 12 | \$48.50 |
| Individually packaged 3 foot lengths. | |

Offered Exclusively to the Animal Research Specialist

For use in chronic:

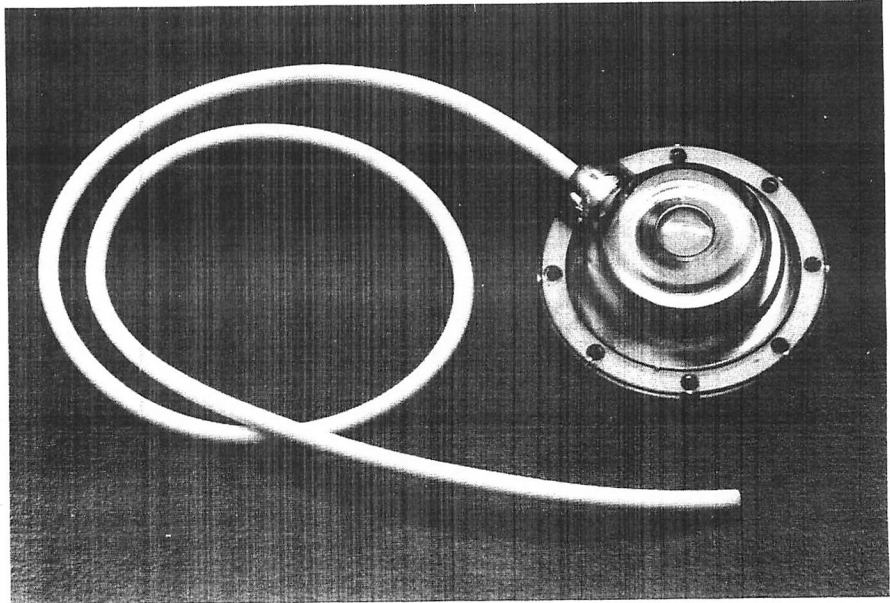
- Blood sampling
- Intra-arterial blood pressure monitoring
- Drug delivery

The Vascular-Access-Port™ is a totally implantable catheter system to be used where repeated access to arteries and veins is desired. The model BS-VAP was designed to provide both convenient and cost effective percutaneous access to the cardiovascular system of research animals. Implanted in the subcutaneous tissue of the animal, the catheter port reduces the trauma to the animal and inconvenience to the investigator associated with repeated venipuncture to withdraw blood or to administer drugs, fluid samples or test substances or with arteriopuncture to monitor blood pressures. The catheter may also be placed in a remote organ or body cavity where selective regional perfusion is desired. The Vascular-Access-Port eliminates the accidental damage and infection associated with externalized catheters.

The subcutaneously mounted self-sealing rubber septum is easily located and is designed to accept over 500 needle punctures without leaking. The contoured port body protrudes slightly from the animal facilitating location of the septum. The unique construction of the port utilizing a biocompatible plastic polysulfone, permits autoclave sterilization and reuse.

The Vascular-Access-Port model BS-VAP is used in dogs, various monkeys including baboons, rabbits, pigs and horses. The Port has found numerous applications and has functioned properly in each. The Vascular-Access-Port is a proven valuable and cost effective research tool.

Vascular-Access-Port™

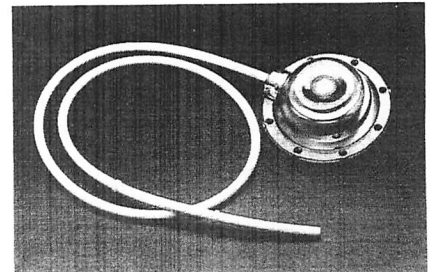


Silicone Catheter Sizes

| | |
|-------------------------------|-------------------------|
| 4 French | .025" I.D. x .047" O.D. |
| 5 French | .030" I.D. x .065" O.D. |
| 6 French | .023" I.D. x .079" O.D. |
| 7 French | .040" I.D. x .090" O.D. |
| 9 French | .060" I.D. x .120" O.D. |
| Length per customer's request | |

| Model | Price |
|------------------------------------------|----------------|
| BS-VAP | \$64.50 |
| BS-VAP-RB* (with retention beads) | \$69.50 |

*Specify size, length, and spacing for retention beads upon ordering.



Vascular-Access-Port (with retention beads)

The beads facilitate retention sutures in the arterial system of the animal.



TDMAC-Heparin

For preparing Non-thrombogenic Plastic Surfaces

TDMAC (Tridodecylmethyl Ammonium Chloride) is an activated complex which is used to impregnate plastic surfaces with the natural anti-thrombogen, Heparin. TDMAC-Heparin reduces fibrinogen adsorption and lowers the thrombogenic potential of plastic surfaces in contact with blood. TDMAC-Heparin can prolong

catheter life by reducing the potential for thrombus formation in catheter lumens.

Supplied as a 2% solution (WT / WT) in toluenepetroleum ether (1:). General instructions are supplied for treating polyurethane (as well as most other plastics).

| Model | Price |
|--------------------------|----------------|
| TDMAC-2 50 ml. | \$68.50 |

UNIT-OF-TISSUE Pathology Solution

**10% Neutral Buffered
Formalin* in Pre-filled
Specimen Vials
ready for direct use.**



Featuring:

- clear plastic jars, both shatter-proof & leak-proof
- stabilized A.F.I.P. formula
- sub-micron filtration, insuring maximum solution purity
- ideal for all histological applications

| Prod. No. | Description | Package | Price |
|-----------|-----------------------------------------------------------------------------|----------|---------|
| 2122 | UNIT-OF-TISSUE, 10 Dram Specimen Jar Prefilled with 20ml. of 10% Formalin. | 100/Case | \$49.50 |
| 2121 | UNIT-OF-TISSUE, 4 Ounce Specimen Jar Prefilled with 60ml. of 10% Formalin. | 24/Case | \$15.85 |
| 2123 | UNIT-OF-TISSUE, 8 Ounce Specimen Jar Prefilled with 120ml. of 10% Formalin. | 24/Case | \$23.75 |
| 2120 | BULK, 1 GALLON Plastic Pour Bottle Filled with 3785ml. of 10% Formalin. | 4/Case | \$26.40 |
| 2128 | BULK, 5 GALLON Cube Container Filled with 10% Formalin. | 1x5 gal. | \$32.00 |

A.F.I.P. Manual, 3rd Edition

Basic Sutures for Small Animal Surgery

Non-absorbable

| SIZE | MATERIAL | LENGTH | MODEL | PRICE/ PACKING |
|--------|----------|----------|-------|-------------------|
| SPOOLS | | | | |
| 7-0 | Silk | 100 yds. | 103-S | 24.50/spool |
| 4-0 | Silk | 100 yds. | 108-S | 24.50/spool |
| 2-0 | Silk | 100 yds. | 113-S | 26.50/spool |
| 0 | Silk | 100 yds. | 116-S | 32.00/spool |
| 1 | Silk | 100 yds. | 119-S | 32.00/spool |

WITH SWAGED NEEDLES

| | | | | |
|------------------------------------------|------|-------|------------|-------------|
| 3/8 circle reverse cutting | | | | |
| 5-0 | Silk | 18" | S-811W | 24.50/doz. |
| 4-0 | Silk | 18" | S-625 | 25.00/doz. |
| 3-0 | Silk | 18" | S-813 | 24.50/doz. |
| 2-0 | Silk | 30" | S-5012 | 24.50/doz. |
| 3/8 circle reverse cutting double needle | | | | |
| 6-0 | Silk | 18" | S-656 | 55.00/doz. |
| 4-0 | Silk | 18" | S-691 | 143.50/doz. |
| 1/2 circle taper point | | | | |
| 3-0 | Silk | 18" | RNS-3713 | 30.00/doz. |
| 2-0 | Silk | 5x18" | S-5149M5 | 86.00/doz. |
| 0 | Silk | 5x18" | RNS-5101M5 | 88.00/doz. |
| 0 | Silk | 30" | S-415 | 25.50/doz. |
| 1/2 circle taper point double needle | | | | |
| 5-0 | Silk | 24" | S-7115 | 51.50/doz. |
| 4-0 | Silk | 24" | S-7116 | 51.50/doz. |
| 3-0 | Silk | 24" | S-7118 | 51.50/doz. |
| straight taper | | | | |
| 3-0 | Silk | 30" | S9-403 | 37.50/doz. |

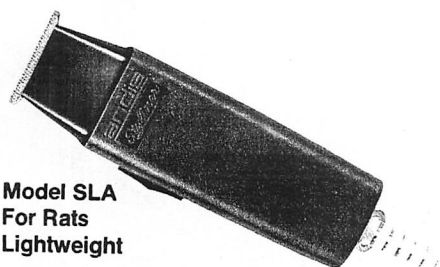
Absorbable

| SIZE | MATERIAL | LENGTH | MODEL | PRICE/ PACKING |
|------------------------------------------|--------------|--------|-------|-------------------|
| WITH SWAGED NEEDLES | | | | |
| 3/8 circle reverse cutting double needle | | | | |
| 6-0 | Gut, chromic | 18" | G-687 | 155.00/doz. |
| 5-0 | Gut, chromic | 12" | G-641 | 59.50/doz. |
| 1/2 circle reverse cutting | | | | |
| 3-0 | Gut, chromic | 36" | G-509 | 31.50/doz. |
| 2-0 | Gut, chromic | 36" | G-510 | 31.50/doz. |
| 1/2 circle taper point | | | | |
| 3-0 | Gut, chromic | 27" | G-340 | 28.00/doz. |
| 2-0 | Gut, chromic | 27" | G-354 | 28.00/doz. |
| 0 | Gut, chromic | 27" | G-365 | 28.00/doz. |
| 1/2 circle taper point double needle | | | | |
| 3-0 | Gut, chromic | 36" | G-395 | 57.50/doz. |
| 2-0 | Gut, chromic | 36" | G-396 | 57.50/doz. |

SILK - The natural softness of silk has been preserved in this high-grade natural suture.

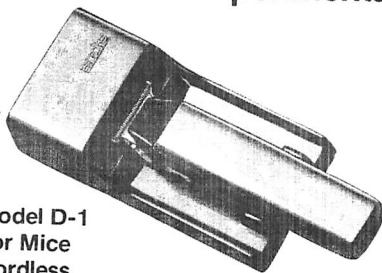
GUT, CHROMIC - Finely machined to guarantee consistent quality and smoothness.

Braintree Surgical Clippers For Experimental Animals



Model SLA
For Rats
Lightweight

Lightweight surgical clipper has exclusive patented T-Blade* which gets into tight places easily. Compact and quiet running, but stands up to daily laboratory use. Lightweight flexible cord allows maximum maneuverability.



Model D-1
For Mice
Cordless

The first cordless specifically designed for very fine hair and delicate skin. Extremely fine blades will shave mice without injury. These clippers are not suitable for larger rodents. We recommend Model SLA for those animals.

| Model | Price |
|-------|---------|
| SLA | \$40.00 |
| D-1 | \$43.00 |

EACH CLIPPER SHIPPED WITH 3 OZ. CAN OF CLIPPEROIL FOR 120V, 60 CYCLE A.C.

Keep a spare blade on hand!

ACCESSORY KITS INCLUDE: SPARE BLADE, SCREWDRIVER AND 3 OZ. CAN OF CLIPPEROIL.
SPECIFY CLIPPER MODEL **\$14.95**

Syringe Pumps

BRAINTREE SCIENTIFIC has *Low Cost* syringe pumps *in stock* for use in Biomedical Research Laboratories! You can probably buy these from your supplies budget.

These pumps have all essential features, but no expensive frills. Two low cost models are available in 3 infusion rate ranges. We proudly offer Model BSP (single speed) and Model BSP-99 (variable speed) syringe pumps as low cost in stock solutions to your syringe pump needs.

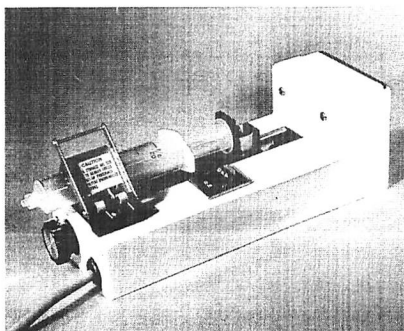
Low Cost Syringe Pump in Stock for Immediate Shipment

Compare Price!

Compare Delivery!

Buy Braintree!

Satisfaction Guaranteed



Single-Speed BSP

The Model BSP Single Speed syringe pump is specifically designed to infuse fluids at an exact and reproducible flow rate from either glass or plastic syringes.

Model BSP syringe pumps are equipped with:

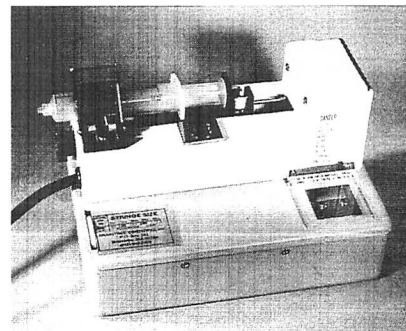
- Automatic shutoff switch (disconnects power at end of syringe)
- Indicator On Light

Model BSP syringe pumps are available at 3 infusion rates: 0.010, 0.1206, and 1.206 ml/min. using a 50ml syringe. A calibration index is provided for infusion rates with different size syringes.

| Model | Price |
|----------------------------------------------------------|-----------------|
| BSP-1 0.010 ml/min; duration = 3 days + | \$195.00 |
| BSP-2 0.1206 ml/min; duration = 6.9 hrs. + | \$195.00 |
| BSP-3 1.206 ml/min; duration = 41 minutes + | \$195.00 |

Note: Above rates obtained with a 50 ml syringe

(Many other rates are available for \$35 extra on special order. Please inquire).



Multi-Speed BSP-99

The Model BSP-99 syringe pump has 99 speeds and is designed for use with readily available glass and plastic syringes (up to 50 ml).

Model BSP-99 syringe pumps are equipped with:

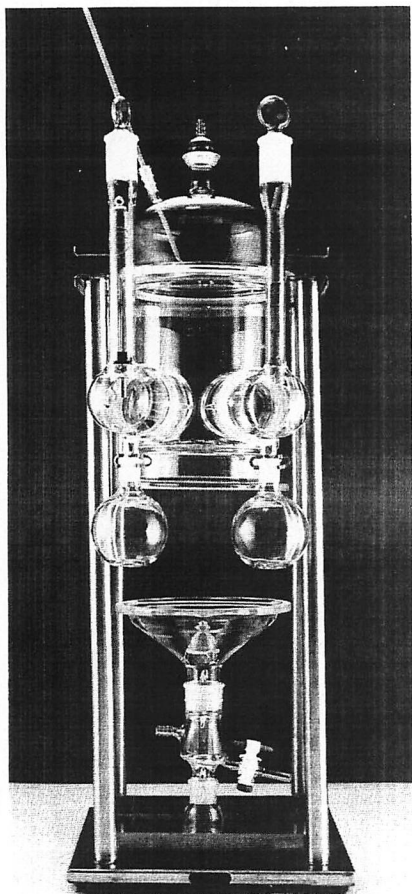
- Built in flow chart
- 99 equally spaced infusion speeds
- A calibrated sheet providing flow rates for the major brand syringes
- Automatic shut off
- Sound alarm to signal an empty syringe

Model BSP-99 is available in 2 infusion rate ranges:

| Model | Price |
|------------------------------------------|-----------------|
| BSP-99M (0.145 to 1.305 ml/hr) | \$495.00 |
| BSP-99 (1.45 to 143 ml/hr) | \$495.00 |

Note: Above rates obtained with a 50 ml syringe.

Precision Glass Metabolism Cages

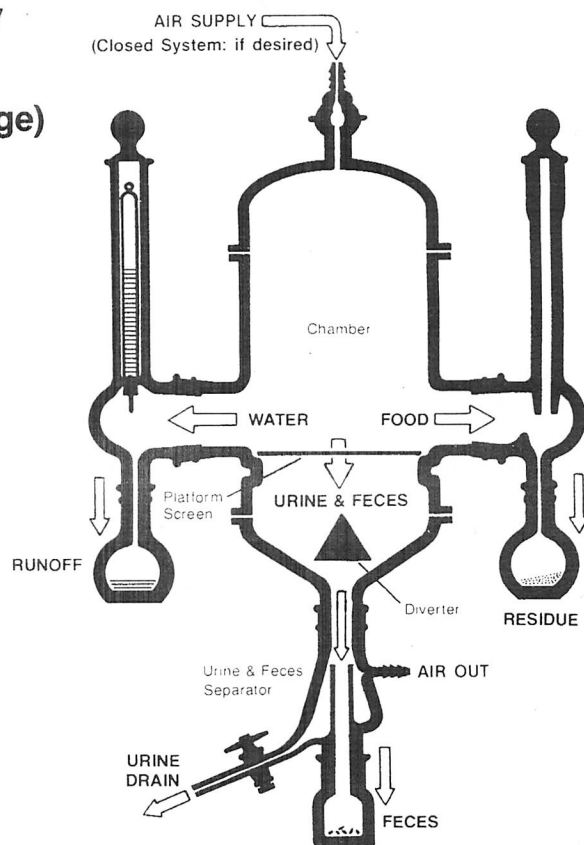


GMC 200 cage with twin ports, mounted in GMS 201 stand. The bottom section (Metabolic Funnel) is shown detached.

Braintree Scientific proudly introduces precision glass metabolism cages for quantitative monitoring of food, water, and gas intakes and collection of excretory products. Research scientists at major medical centers and pharmaceutical laboratories, working with glass fabricators, have refined these units in trials conducted over the past several years. The result is a state-of-the-art system featuring quantitative accuracy and reproducibility combined with superb labor saving design.

The Anatomy of a GMC (Glass Metabolism Cage)

(Feeder and Waterer shown in diagrams at 180° for convenience. Actual is shown at left).



Precision all glass parts are freely interchangeable and serviceable, without handling test animals. Units can be made airtight for gas metabolism or radioisotope studies. Optional and replacement parts are readily available. Braintree Scientific GMC metabolism cages will increase productivity and effect substantial research dollar savings.

Glass vs. Plastic

GLASS cages are superior to plastic cages for some very basic reasons:

- GLASS cages will not warp or distort. Ground joints provide absolute seals.
- GLASS can be effectively decontaminated; plastic cannot.
- GLASS cages are solvent compatible, sterilizable and autoclavable.
- GLASS cages are adaptable for use with chronically instrumented animals.
- GLASS cages will not discolor or craze and cannot be scratched by the test animal. They are transparent.
- GLASS cages can be made airtight for flow through gas metabolism studies.

These GMC's (Glass Metabolism Cages) are fabricated from Pyrex® borosilicate glass.

Please turn page for details

Precision Glass Metabolism Cages

Features

- Twin feeder & waterer ports, close together for better access.
- Ground glass standard taper joints.
- Stainless steel mesh cover screen and platform screen. Platform screen mesh spacing allows for complete pass-thru of fecal material, with little hang-back.
- All parts are easily accessible and can be removed and replaced in less than three minutes without disturbing the test animal.

WATER SYSTEM:

- Fixed volume type; includes Body, Stopper, and Water Tube with rubber stopper and stainless sipper tube. Runoff is collected by a flask.

FEED SYSTEM:

- Pellet type; includes Body, Stopper, and Residue Flask.

COLLECTION SYSTEM:

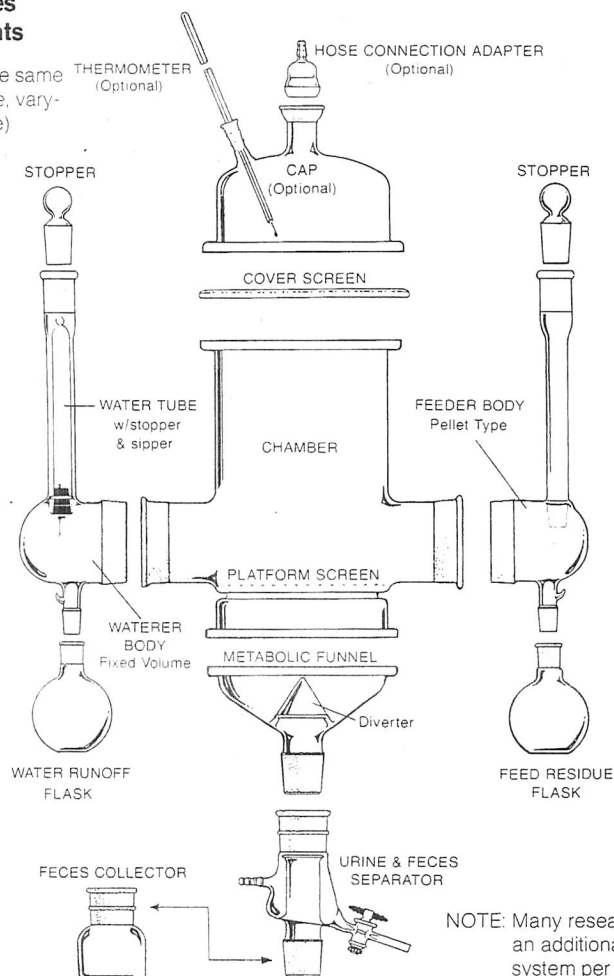
- Steep pitched Metabolic Funnel with fused-in diverter. The Metabolic Funnel is DETACHABLE for ease of access and cleaning, without disturbing the animal in its chamber.
- The Metabolic Funnel makes an airtight seal with the Chamber. Pitch and small surface area of the funnel and diverter minimizes retention of excretory products.
- Urine & Feces Separator; includes stop-cock drain and hose connection. A separate Feces Collector connects to it.

OPTIONAL GLASS CAP:

- An airtight environment is possible with the addition of the optional glass Cap, which includes ports for a thermometer and hose connection adapter.

GMC-Series Components

(All cages have same basic structure, varying only in size)



NOTE: Many researchers order an additional collection system per cage to facilitate rapid changes during metabolism studies.

Two standard models are available:

| Model | Description | Price |
|---------|-------------------------------------------------------------------------------------------------------------|----------|
| GMC 100 | Small cage for animals up to 100 grams in weight. Chamber height is 110mm (w/o Cap) with a 100mm O.D. Cage. | \$537.20 |
| GMS 101 | Stand is required for this cage. Includes spill pan. | \$190.00 |
| GMC 200 | Medium size cage for 100 to 350 gram animals. Chamber height is 120mm (w/o cap) with a 178mm O.D. Cage. | \$819.00 |
| GMS 201 | Stand is required for this cage. Includes spill pan. | \$190.00 |

Cages are supplied with TWIN (located close together) feeder and waterer ports to allow for easy access in multiple rack mountings. Optional OPPOSING ports can be supplied by individual mountings.

Precision Glass Metabolism Cages

Parts and Accessories Price List

| ITEM DESCRIPTION | GMC 100 Small | | GMC 200 Medium | |
|----------------------------------|------------------|----------|-------------------|----------|
| | Part No. | Price | Part No. | Price |
| COVER SCREEN, Stainless Steel | GMC 108 | \$ 39.80 | GMC 208 | \$ 38.00 |
| CHAMBER | GMC 110 | 115.00 | GMC 210 | 283.85 |
| FEEDER BODY, Pellet Type | | | GMC 212 | 66.50 |
| FEEDER STOPPER w/Clamp | GMC 113 | 7.50 | GMC 214 | 9.50 |
| FEED RESIDUE FLASK w/Clamp | GMC 115 | 9.10 | GMC 216 | 11.50 |
| WATERER BODY, Fixed Volume | GMC 120 | 60.00 | GMC 220 | 65.00 |
| WATERER STOPPER w/Clamp | GMC 114 | 7.50 | GMC 214 | 9.50 |
| WATER RUNOFF FLASK w/Clamp | GMC 116 | 9.10 | GMC 216 | 11.50 |
| WATER TUBE w/Stopper & Sipper* | GMC 122 | 10.50 | GMC 222 | 10.50 |
| WATER TUBE HOOK | GMC 124 | 3.50 | GMC 224 | 3.50 |
| METABOLIC FUNNEL w/Clamps | GMC 138 | 66.00 | GMC 238 | 137.85 |
| URINE & FECES SEPARATOR w/Clamp | GMC 140 | 95.00 | GMC 240 | 118.90 |
| FECES COLLECTOR w/Clamp | GMC 142 | 12.50 | GMC 242 | 14.50 |
| PLATFORM SCREEN, Stainless Steel | GMC 144 | 39.00 | GMC 244 | 39.00 |
| Complete Cage; 14 Pieces: | \$537.20 | | \$819.60 | |

OPTIONS

| | | | | |
|------------------------------------|---------|----------|---------|----------|
| CAP, Glass w/Clamp | GMC 102 | \$ 63.50 | GMC 202 | \$158.30 |
| HOSE CONNECTION ADAPTER | GMC 104 | 17.50 | GMC 204 | 18.45 |
| THERMOMETER (-10 to 110°C) | GMC 106 | 11.50 | GMC 206 | 11.50 |
| FEEDER BODY, Granular Type** | GMC 118 | 63.50 | GMC 218 | 66.50 |
| WATERER BODY, Variable Volume*** | GMC 126 | 57.00 | GMC 226 | 57.00 |
| SIPPER TUBE, Glass For Above Only | GMC 128 | 12.80 | GMC 228 | 12.80 |
| WATER BOTTLE, 25 ml For Above Only | GMC 130 | 12.80 | | |
| 100 ml | GMC 132 | 12.80 | GMC 232 | 12.80 |
| 250 ml | | — | GMC 234 | 15.80 |
| 500 ml | | — | GMC 236 | 18.90 |

*Our customers have found it convenient to order these tubes in units of a half dozen or a dozen.

**Uses same stopper and residue flask as Pellet Type Feeder.

***Uses same runoff flask as Fixed Volume Waterer.

NOTE: The above listed cages are supplied with standard taper joints. However, optional O-ring joints can also be supplied. Cages are supplied with TWIN (located close together) feeder and waterer ports to allow for easy access in multiple rack mountings. Optional OPPOSING ports can be supplied for individual mountings.

SUPPORT STANDS

Stainless steel; self-contained, adjustable and portable.

| STAND NO. | SIZE | FOR CAGE | PRICE |
|-----------|--------|----------|----------|
| GMC 101 | Small | GMC 100 | \$190.00 |
| GMS 201 | Medium | GMC 200 | 190.00 |

| Model | Price |
|-------|-------|
|-------|-------|

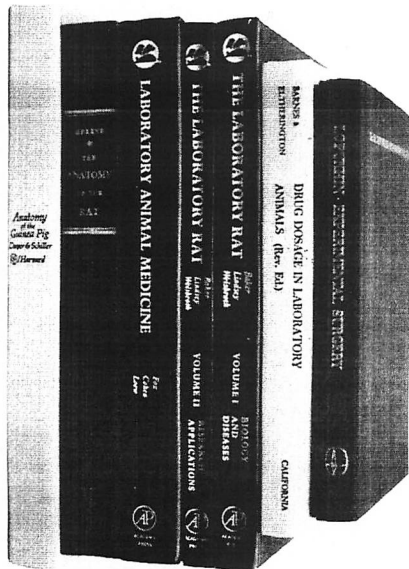
Multiple Rack

GMR 400 \$660.00

for GMC 200 model only.
Cage capacity: 4; Height: 34";
Width: 26"x26". Stainless steel
with rollers. This unit will easily
pass through standard door-
ways. All cages face in different
direction. Unit will sit on counter-
top if rollers are removed.

Every cage is completely
assembled and thoroughly
checked before shipment.
We deliver on time!

Reference Books



Laboratory Animal Medicine

Edited by: James G. Fox, Bennett J. Cohen, Franklin Loew

Laboratory Animal Medicine is intended for researchers and students in the fields of biology and medicine who utilize animals in biomedical research. Contents include: Biology and diseases of mice, rats, guinea pigs, (and other rodents), rabbits, old and new primates, ferrets, birds, reptiles and amphibians; dogs, cats, and ungulates as laboratory animals; laws, regulations and policies affecting the care of laboratory animals; and historical perspectives. Laboratory Animal Medicine is a basic source book and reference text for all modern laboratories involved in biomedical research.

\$60.00

The Laboratory Rat

A compendium on the laboratory rat. Volume 1 (Biology and Diseases) details historical foundations, taxonomy, genetics, inbred strains, morphophysiology, hematology and clinical biochemistry, nutrition, reproduction and breeding, and diseases. Volume 2 (Research Applications) details research methodology, toxicology, experimental oncology, gerontology, immunology and parasitology, cardiovascular research and models of human disease. Selected normative data and drug dosages are also included. The Laboratory Rat is the modern companion for the classic *Anatomy of the Rat*.

Volume 1 Edited by: Henry J. Baker, Russell Lindsey, Steven Weisbroth

Volume 2 Edited by: Henry J. Baker, Russell Lindsey, Steven Weisbroth

Vol. 1 \$ 67.50

Vol. 2 \$ 67.50

Vol. 1&2 \$115.00

Drug Dosage in Laboratory Animals

Barnes and Eltherington

Drug Dosage in Laboratory Animals is an up-to-date compendium of drug information essential for every scientist who uses animals. From "Acetaldehyde" to "Zoxazolamine", this fully referenced text shows doses required for specific physiological, pharmacological and toxicological endpoints. Intravenous, intraperitoneal, intramuscular, subcutaneous and oral routes of administration in mouse, rat, guinea pig, rabbit, cat, dog and monkey are indicated. Fully indexed and annotated, this book also provides spaces for addition of new doses and species as developed in your laboratory.

Drug Dosage in Laboratory Animals makes research quicker and more consistent in academic and industrial laboratories. Hardcover, 7"x9" format.

\$45.00

Anatomy of the Guinea Pig

by: Gale Cooper and Alan L. Schilla

If you use guinea pigs in your research or teaching, or are considering using them as a substitute for larger and more expensive species, then you need this reference source. Over 400 detailed drawings are presented in an oversize (10½x12") format. The accompanying text describes each organ system. This volume provides 414 pages of essential information to make your work easier.

\$50.00

Anatomy of the Rat

by: Eunice Chase Greene

This basic reference for all researchers using laboratory rats includes 339 precisely detailed drawings, most full page and in color. The large format (8½x11") and clarity of the presentations make this book as valuable on the laboratory bench as in the library. In our opinion, no other text even comes close. Satisfaction is, of course, guaranteed. BRAINTREE SCIENTIFIC, INC. will refund complete purchase price and shipping cost to any customer who feels any book does not live up to expectations.

\$60.00

Experimental Surgery

by: Yuri M. Lopukhin

Many advances in medical science have resulted from studies involving experimental surgery. Although the skill of Russian surgeons has been long known, based on hearsay and fragmentary reports, little authoritative information regarding their techniques has come to the West. Now, BRAINTREE SCIENTIFIC has obtained an English edition of the standard Soviet text on experimental surgery. In 472 pages, with 257 illustrations, experimental approaches to all organ systems are described in detail. Over 700 citations of original sources are included. This rare and valuable reference source belongs in the library of every well informed biomedical scientist.

\$35.00

Ordering Information

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Freight: F.O.B. Braintree, MA. Freight is prepaid and added to invoice.

Satisfaction Guaranteed! If for any reason you are not fully satisfied, call or write for return instructions. Be sure to include your tax exempt number where applicable.

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