

DRUMMOND series 300 FIXED VOLUME MICRODISPENSER

Pat. No. 3-606-086 and other Pat. Pending

Thank you . . . for purchasing a Drummond Microdispenser. This instruction sheet will help you operate and maintain your unit. Sample deliveries with a volumetric tolerance of $\pm 1\%$ are assured through the use of Drummond Precision Glass Bores.

CATALOG NUMBER	CAPACITY (μ l)	PIPET COLOR CODE	PIPET CAT NUMBER	PLUNGER TIP
3-000-333	3.33/6.66	Red	3-000-333-G	S/S wire
3-000-310	10	Red	3-000-210-G	S/S wire
3-000-320	20	Black	3-000-320-G	S/S wire
3-000-325-20	20	Black	3-000-325-20-G	Teflon tip
3-000-325	25	White	3-000-225-G	Teflon tip
3-000-340	40	Green	3-000-340-G	Teflon tip
3-000-344	44.7	Green	3-000-344-G	Teflon tip
3-000-350	50	Green	3-000-250-G	Teflon tip
3-000-375	100	Blue	3-000-275-G	Teflon tip
3-000-385	100/200	Blue	3-000-275-G	Teflon tip
3-000-388	250	Black	3-000-388-G	Teflon tip

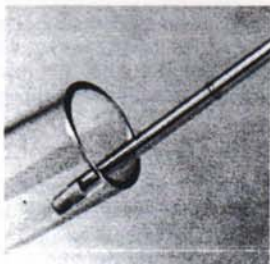
MICRODISPENSERS WITH TEFLON TIPS WILL OPERATE FREELY ONCE THE TIP IS WET.



A

SAMPLE COLLECTION

Depress the plunger fully, immerse the tip into the solution and release the plunger slowly. The exterior of the glass bore should be wiped free of excess sample with a wiper, being careful to avoid the end of the capillary.



B

DELIVERY

Expel the sample by depressing the plunger completely. Touch the tip of the tube to the side of the receiving vessel or swirl the tip in diluent to remove the last of the sample. With the plunger still depressed, wipe any remaining fluid from the tip before the next sampling.



C

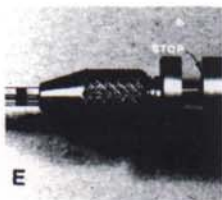
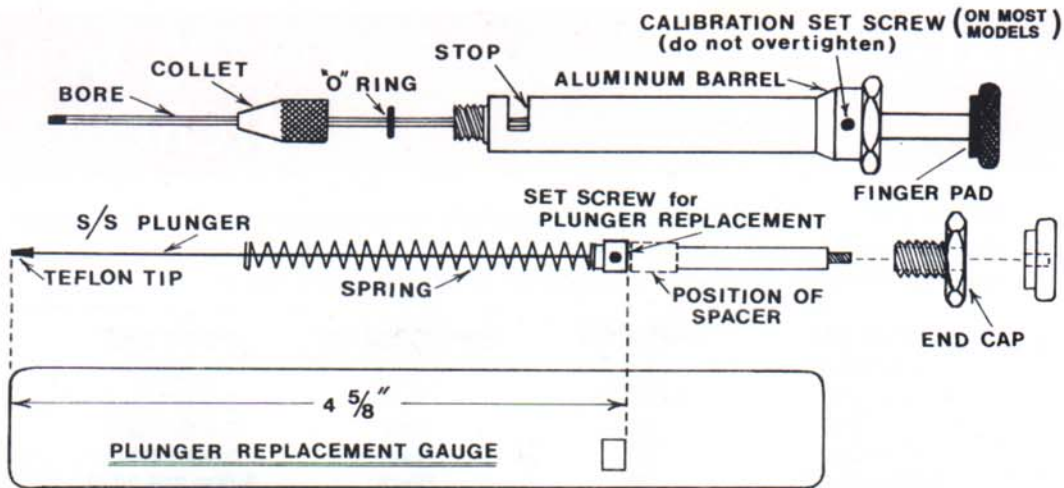
CHANGING VOLUME BY ADDING SPACERS

The stroke can be shortened and the volume reduced by placing spacers on the plunger. To install a spacer, remove the finger pad and the end cap and slide the spacer over the plunger. Replace the end cap and the finger pad. Custom spacers for any delivery can be obtained from the factory.

D

STORAGE

For best results, always store your Microdispenser with a new unused bore, or without a bore.



E

REPLACEMENT OF PRECISION BORES

To replace the precision bore, loosen the knurled collet and remove the used tube. Slip on the new bore, making sure that the color coded end is first. This end of the tube has been fire polished to prevent damage to the teflon tips. The bore must be fully inserted until it rests against the stop in the barrel, then the collet should be tightened. To remove a broken bore, first slide off the broken portion in contact with the teflon tip. **Caution:** do not attempt to slide broken glass over the backside of the tip. Break remaining glass with pliers, etc. Wear eye protection when breaking glass.

F

USE OF THE RESIZING TOOL

To renew the teflon plunger tip hold the Microdispenser in a vertical position such that the tip rests on a flat surface. Place the tool on the wire as shown and apply a gentle downward pressure. Rotate the tool 180° and reapply the pressure. The extended tip will give like-new performance.

G

TEFLON TIP REPLACEMENT

Should the teflon tip become worn or loose after extended use it can be easily replaced by one of the extra tips included with your unit. The old tip can be removed with a sharp knife or razor blade. Place the new tip into the holding block, then insert the plunger wire into the tip as shown. Be certain to use both hands, one to hold the Microdispenser over the block, the other to steady the wire as pressure is applied to force the tip onto the wire. **Recalibrate unit.**
"ALWAYS MOISTEN NEW TIP"

H

CALIBRATION

On units without spacers, the Microdispenser will be calibrated if the end of the tip bisects the calibration line printed on the pipet. If it does not, loosen the set screw on the barrel with the allen wrench provided and turn the end cap until the tip bisects the line. On units equipped with spacers, the calibration can be checked with the gauge provided for plunger wire replacement.

I

PLUNGER REPLACEMENT

To replace the tip and wire assembly, loosen the set screw on the barrel, remove the end cap by turning it counter-clockwise, and remove the plunger assembly from the barrel. Loosen the set screw and remove the old wire. Using the gauge provided, set the new wire into the plunger such that the end of the collar rests against the hole in the gauge, and the end of the tip is flush with the end of the gauge. Firmly tighten the set screw.

IN CASE OF DIFFICULTY . . .

Please do not hesitate to call us concerning any difficulties that may arise. We maintain a complete selection of parts ready to keep your Microdispensers in service.

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