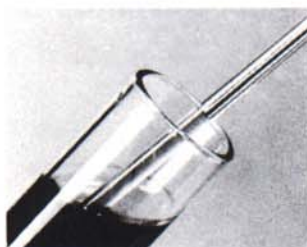


DRUMMOND Catalog No. 105 MICRODISPENSER

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 full scale volumetric tolerance of $\pm 1\%$ are assured through the use of Drummond Precision Glass Bores.



A

SAMPLE COLLECTION

Depress the plunger fully, immerse the tip into the solution and release slowly. Check that there are no bubbles in the fluid column. Using a wiper, carefully wipe excess fluid from the sides of the capillary, being careful not to draw fluid from the end of the capillary.



B

DELIVERY

Expel the sample by depressing the plunger completely. Increments of one microliter can be dispensed by slowly depressing the plunger until the control spring snaps into one of the five grooves on the plunger. Touch the end of the capillary to the side of the receiving vessel to remove the sample.



C

CHANGING VOLUME BY ADDING SPACERS

The overall volume of the unit can be reduced by placing one of the four spacers included with the unit on the plunger. To install a spacer, remove the finger pad and the end cap by unscrewing them and slide the appropriate spacer over the end of the plunger. Replace the end cap and the finger pad. The spacers are color coded as follows:

TO DELIVER

4 μ l
3 μ l
2 μ l
1 μ l

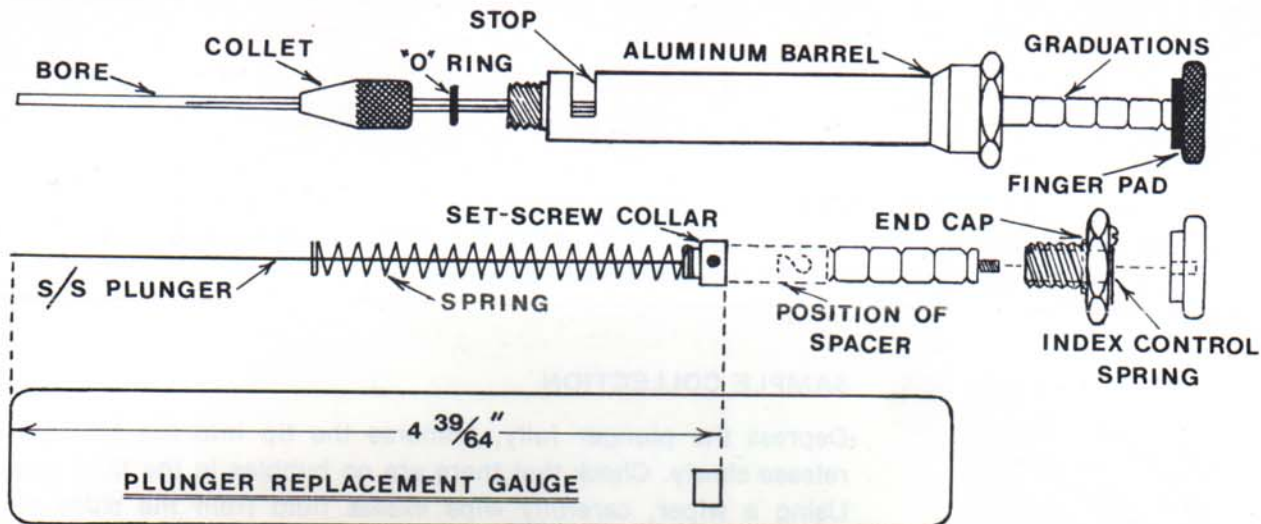
USE

Silver
Red
Blue
Gold

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 a new bore, making sure that the end of the tube rests against the stop, then tighten the collet. If difficulty is encountered inserting the wire in the bore, check the wire plunger for scratches or bends. If scratched or bent, replace the wire.

F

CALIBRATION CHECK

With a new, properly installed capillary, depress the plunger until the index control spring engages the last groove on the plunger (one next to the finger pad). The unit will be calibrated if the end of the wire piston is flush with the end of the capillary.

G

WIRE PLUNGER REPLACEMENT

To replace a bent or broken wire, remove the finger pad and the end cap, and slide the plunger and wire from the barrel. Loosen the set screw and remove the wire. Using the gauge provided, set the new wire into the plunger such that the end of the tip is flush with the end of the gauge. Firmly tighten the set screw. Reassemble the unit and check the calibration.

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.