

DRUMMOND series 200 DIALAMATIC 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 Microdispenser. Sample deliveries with a $\pm 1\%$ full scale volumetric tolerance are assured through the use of Drummond Precision Glass Bores.

CATALOG NO.	OVERALL CAPACITY	GRADUATION INCREMENTS	COLOR	REPL. GLASS CATALOG NO.	PLUNGER TIP
3-000-210	10 μl	1 μl	Red	3-000-210-G	Stainless steel
3-000-225	25 μl	1 μl	White	3-000-225-G	SS w / teflon
3-000-250	50 μl	2 μl	Green	3-000-250-G	SS w / teflon
3-000-275	100 μl	10 μl	Blue	3-000-275-G	SS w / teflon

PRESETTING SAMPLE DELIVERY



A

The plunger should be turned clockwise until the desired sample size is opposite the reference mark on the end cap. To return the unit to its full capacity, turn the plunger counter-clockwise. Two scales are provided on the 10 μl and the 100 μl units. To dispense a sample size that lies between the units on your Microdispenser, please note that you can interpolate by adding or subtracting parts of a turn based on the following table:

UNIT	ONE TURN	$\frac{1}{2}$ TURN	$\frac{1}{4}$ TURN
3-000-210	.4 μl	.2 μl	.1 μl
3-000-225	1 μl	.5 μl	.25 μl
3-000-250	2 μl	1 μl	.5 μl
3-000-275	4 μl	2 μl	1 μl

THE MICRODISPENSER PLUNGER WILL SLIDE FREELY IN THE GLASS BORE ONCE IT IS WET.



B

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 any excess sample with a wiper, being careful to avoid drawing any sample from the end of the capillary.



C

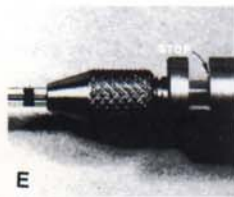
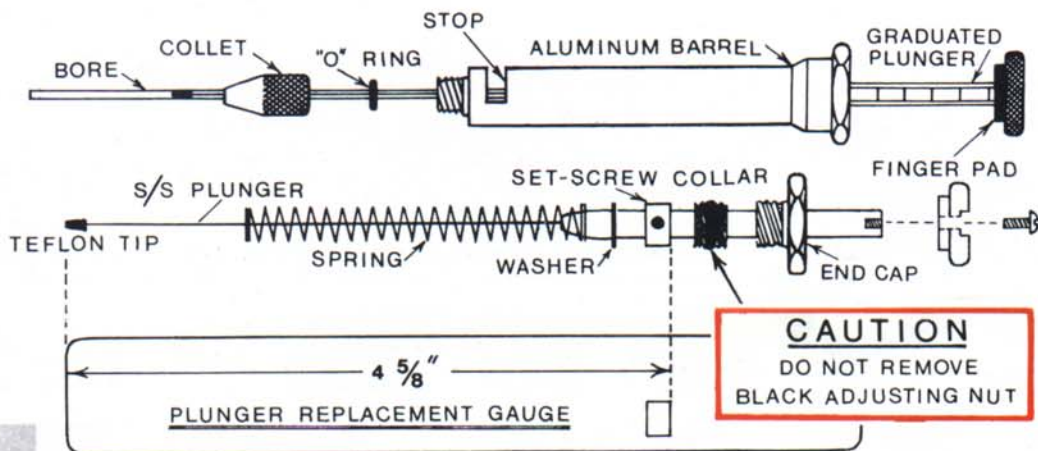
DELIVERY

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 entire sample.

D

STORAGE

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



E

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 capillary, 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.



E

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.



F

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 a 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.



G

H CALIBRATION

The calibration of the unit can be checked by two methods; with the unit set for maximum capacity, the bottom of the tip should bisect the calibration line printed on the tube, also when the unit is dialed down to zero the tip should be flush with the end of the pipet. If the teflon tip extends beyond the end of the pipet, trim it with a razor. If model 210, with s.s. plunger follow procedure in section I.



G

I PLUNGER REPLACEMENT

To replace the plunger wire remove the end cap and turn the plunger assembly counter-clockwise until it is free of the barrel. **CAUTION:** Do not remove the adjusting nut from the graduated plunger, as the Dialomatic calibration will be destroyed. Loosen the set screw and remove the old wire. Using the gauge provided, set the new wire into the plunger assembly 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.

DRUMMOND SCIENTIFIC COMPANY
500 PARKWAY • BROOMALL, PA. 19008

(610) 353-0200

(800) 523-7480

www.drummondsci.com