

Department	Micro Laboratory	Document no	MICLAB – METHOD 018		
Title	Procedure for maintenance of IQ 2000 MKII Precision Peristaltic and Perimatic Premier Dispenser				
Prepared by:		Date:		Supersedes:	
Checked by:		Date:		Date Issued:	
Approved by:		Date:		Review Date:	

1.0 SUMMARY OF CHANGES

Version #	Revision History
MICLAB – METHOD 018	New

2.0 PURPOSE

This procedure describes how to use and maintain the IQ 2000 MKII Precision Peristaltic Dispenser and the Perimatic Premier Dispenser.

3.0 SCOPE

This procedure is to be followed when dispensing large volumes of broth and molten media or diluent.

4.0 RESPONSIBILITY \ BUSINESS RULES

Microbiology staff at a GMP Laboratory.

5.0 PROCEDURE

5.1 **IQ2000 PERISTALTIC DISPENSER**

5.1.1 MATERIALS REQUIRED LIST

5.1.1.1 IQ 2000 Perimatic Premier Dispenser

5.1.1.2 Beaker of media.

5.1.1.3 Measuring cylinder.

5.1.1.4 Tubing.

5.1.1.5 Arrangement of containers and racks for dispensing runs.

5.1.2 WORK INSTRUCTION

5.1.2.1 Preparation

5.1.2.1.1 Prepare containers and racks for easy access with nozzle, prior to dispensing.

5.1.2.1.2 Ensure agar is fully molten and dissolved.

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5.1.2.1.3 Select tubing according to required dose volume, e.g. 3 mm bore tube for 10 ml doses, 5 mm bore tube for 30-150 ml doses and 8mm bore size for larger volumes.

5.1.2.1.4 Fit tubing to Perifill IQ 2000 as per diagram below:

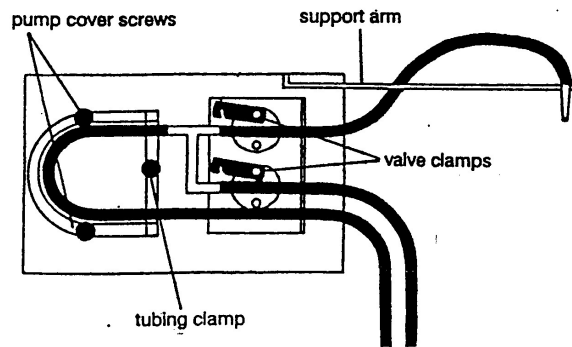


Figure 1

5.1.2.1.5 Ensure that the reservoir tubes are fully immersed in the fluid to be dispensed and the outlet nozzle is over the container.

5.1.2.1.6 Switch power on.

5.1.2.1.7 The Liquid Crystal Display (LCD) will alternate between *Prime Tubing* and *Switch Pump*
START to RUN

5.1.2.1.8 Prime tubing by pressing 'START' or foot switch.

5.1.2.1.9 Once tubing is fully primed and contains no air bubbles, press stop or foot switch.

5.1.2.1.10 The LCD will read *Select nearest tube size --> 3 5 8*

5.1.2.2 Calibration

5.1.2.2.1 Select nearest tube size by pressing either 3mm, 5mm, or 8mm bore tube buttons on the "calibrate sample" display.

The tube size is displayed on the glass T-junction of the tubing.

5.1.2.2.2 Once the nearest tubing size has been entered, the instrument indicates an approximate calibration volume of 10 ml for 3mm bore, 30 ml for 5mm bore and 50 ml for 8mm bore.

5.1.2.2.3 Place nozzle over appropriate sized measuring cylinder and press

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start, to measure sample volume.

5.1.2.2.4 LCD alternates between,

When → *x ml* *and* *Test* → *x ml*
agreed program *sample start*

(*x* being approximate calibration volume)

5.1.2.2.5 Use DISPENSE VOLUME arrow keys to adjust display volume to agree with dispensed volume.

5.1.2.2.6 Press START to re-check calibration. When satisfied with calibration, press SLOW or FAST to continue.

5.1.2.3 Dispensing

5.1.2.3.1 If FAST is selected, LCD will read

sso 0.00ml sfo
fast manual P

LCD will read *0.00 ml*
 slow manual P

5.1.2.3.2 Select required dispense volume using DISPENSE VOLUME arrow keys.

5.1.2.3.3 For single doses, press start key every time dose is required.

5.1.2.3.4 For multiple doses, press auto/delay.

5.1.2.3.5 Display changes to *0.00 ml*
 slow auto 0.5s M
if set on slow.

OR *sso 0.00ml sfo*
 fast auto 0.5s M

5.1.2.3.6 Press auto/delay to increase delay between each fill in 0.5 second steps to 9.5 seconds maximum.

5.1.2.3.7 Press START and the dose will be repeated until STOP is pressed.

5.1.2.3.8 During dispensing display changes to
rec nDOSE
set OCOUNT.
and shows the number of doses delivered.

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5.1.2.3.9 The number of doses can be set by using the arrow keys with the instrument on stand by. When the instrument has delivered the pre set number of doses it will stop.

5.1.2.3.10 Zero the recorded dose count by setting the instrument to stand by and pressing the zero record key.

5.1.2.3.11 Pump can be switched to STAND BY when temporarily not in use.

5.1.2.3.12 When finished, wash out tubing by priming with hot tap water followed by rinsing with purified water and dry in oven before storing.

5.2 PERIMATIC PREMIER DISPENSER

5.2.1 MATERIALS REQUIRED LIST

5.2.1.1 Jencons Perimatic Premier Dispenser

5.2.1.2 Beaker of media

5.2.1.3 Measuring cylinder

5.2.1.4 Tubing

5.2.1.5 Arrangement of containers and racks for dispensing runs

5.2.2 WORK INTRUCTION

5.2.2.1 Preparation

5.2.2.1.1 Loosen the red knob and lift off pipe clamp. Refer figure 2.

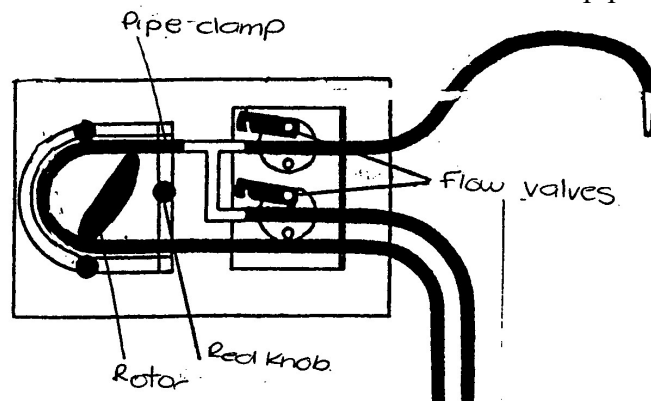


Figure 2

5.2.2.1.2 The silicone tubing is fitted into the arc of the rotor casting, facilitated by turning the rotor by hand.

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5.2.2.1.3 Tighten the pipe clamp and red knob. Use a clockwise twisting action to release the flow valve tops, secure the tubing into place.

5.2.2.1.4 Twist the flow valve tops closed once tubes are in position.

5.2.2.1.5 Feed all three pipes through the slots on right side of case, with the entire mechanism enclosed by the front panel before operations begin.

5.2.2.1.6 Ensure that the reservoir tubes are fully immersed in the fluid to be dispensed and outlet nozzle is over the container.

5.2.2.1.7 Switch power on at the rear of machine.

5.2.2.2 Setting the Dispensing Volume

5.2.2.2.1 Display will show

Software Ver 3.6
Memory Set up Pump

5.2.2.2.2 Press “Set up” button.

5.2.2.2.3 Press “OPTIONS” button.

5.2.2.2.4 Press “VOLUME” button.

5.2.2.2.5 Enter the amount of fluid to be dispensed (ml) using the numeric keys.

5.2.2.2.6 Press “ENTER” to update display.

5.2.2.2.7 Press “ACCEPT” to store volume.

5.2.2.3 Setting the repeated dispensing count

5.2.2.3.1 Press “COUNT” button.

5.2.2.3.2 Enter the number of times dispenser is to repeat.

5.2.2.3.3 Press “ENTER”.

5.2.2.3.4 Press “ACCEPT”.

5.2.2.3.5 Press “NEXT”.

5.2.2.4 Setting delay between dispensing

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5.2.2.4.1 Press “DELAY”.

5.2.2.4.2 Enter time delay using keypad, followed by “ACCEPT”.

5.2.2.5 Automatic and Manual Modes

5.2.2.5.1 Press “MODE” button –the current selected mode is displayed.

5.2.2.5.2 Press “NEXT” key to change mode.

5.2.2.5.3 Press “ACCEPT” to store selected set up.

5.2.2.5.4 Press “NEXT”.

5.2.2.6 Setting the pumping Rate

5.2.2.6.1 Press “PROFILE”.

5.2.2.6.2 Press “NEXT” until the desired combination is displayed FAST, FAST, FAST is most commonly used.

5.2.2.6.3 Press “ACCEPT”.

5.2.2.7 Set Tube size

5.2.2.7.1 Press “TUBE”.

5.2.2.7.2 Press “NEXT” button until the correct tube size appears.

5.2.2.7.3 Press “ACCEPT”.

5.2.2.7.4 Press NEXT”.

5.2.2.7.5 Press “ENTER”.

5.2.2.8 Prime the System

5.2.2.8.1 Press “PRIME”.

5.2.2.8.2 Press “ACCEPT”

5.2.2.8.3 Once tubing is fully primed and contains no air bubbles press “ACCEPT”.

5.2.2.9 Calibration

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- 5.2.2.9.1 From main menu press "SET UP".
- 5.2.2.9.2 Press "CAL".
- 5.2.2.9.3 Press "VOLUME".
- 5.2.2.9.4 Enter the amount of fluid to calibrate to in mL.
- 5.2.2.9.5 Press "ENTER".
- 5.2.2.9.6 Press "ACCEPT".
- 5.2.2.9.7 Press "START" to dispense volume entered, into appropriate sized measuring cylinder.
- 5.2.2.9.8 Enter the actual volume dispensed in mL.
- 5.2.2.9.9 Press "ENTER".
- 5.2.2.9.10 Press "ACCEPT".
- 5.2.2.9.11 Press "QUIT" to store calibration.
- 5.2.2.9.12 If needed - Press "START" to pump a new sample to check calibration.
- 5.2.2.9.13 Press "ENTER".
- 5.2.2.9.14 Press "PUMP" to start dispensing.

5.2.2.10 Memory Facilities

- 5.2.2.10.1 To store a setting, from set up menu press "MEMORY".
- 5.2.2.10.2 Press "STORE".
- 5.2.2.10.3 Use the numeric keypad to enter a memory number.
- 5.2.2.10.4 Press "ACCEPT".
- 5.2.2.10.5 A comment may be entered. Use the 4 or 6 number keys to move the cursor left or right. The 2 and 8 keys change the character under the cursor 2 moves up the alphabet and 8 moves down. Pressing 5 will copy the character to the left of the cursor.
- 5.2.2.10.6 Press "ACCEPT".
- 5.2.2.10.7 To retrieve a setting in memory press "REVIEW".

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5.2.2.10.8 Press “NEXT” until desired setting.

5.2.2.10.9 Press “RECALL”.

5.2.2.10.10 When finished, wash out tubing by priming with hot water followed by rinsing with purified water and dry in oven before storing.

6.0 **DEFINITIONS / ACRONYMS**

N/A

7.0 **REFERENCES**

N/A