

THE UNIVENTOR MICROSAMPLERS



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EDITION 5

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Section 1 - WARRANTY & SERVICE

1.1. WARRANTY

Univentor Ltd guarantees all components of the 810 and 820 Microsamplers to be free from defects of material and workmanship for a period of two years after initial purchase. Univentor will repair and replace, at its discretion, all defective components during the aforementioned warranty period.

Univentor reserves the right to waive all warranties in the case of problems due to improper handling.

For warranty service or repair, all Univentor's products must be returned to Univentor or to an authorised Univentor representative. The client is responsible for shipping charges to Univentor.

The foregoing warranty shall not apply to defects resulting from improper or inadequate maintenance by the client, unauthorised modification or misuse, operation outside of the environmental specifications for the product, or improper site preparation or maintenance.

For any product expressly covered under this warranty, Univentor is liable only to the extent of replacement of the defective items. Univentor shall not be liable for any personal injury, property damage, or consequential damages of any kind whatsoever. The foregoing warranty is in lieu of all other warranties of merchant ability and fitness for a particular purpose.

1.2. DAMAGED SHIPMENTS

Damage to any part of this instrument during shipping should be reported immediately to Univentor or an authorised representative. You must retain the original packing box and contents for inspection by the freight handler. Univentor will replace any new instrument damaged in shipping with an identical product as soon as possible after the claim filing date. Claims not filed within 30 days after the shipping date will be invalid. Do not return damaged goods to Univentor without first contacting Customer Service for a Return Authorisation Number (RA#). When a defective part is returned to Univentor, the RA# immediately identifies you as the sender, and describes the item being returned. Univentor refuses all unauthorised return shipments.

1.3. SERVICE

Univentor has a skilled service staff available to solve any technical problem. For further details contact Univentor or Univentor's representative. Following discussion of your specific difficulties, an appropriate course of action will be described and the problem resolved accordingly. Do not return any products for service until a RETURN AUTHORISATION NUMBER (RA#) has been obtained. The RA# identifies you as the sender and describes in full detail the problems you have. Turnaround time for service can be quoted to you at the time your RA# is issued, although we can not determine the actual amount of service required until we have received your unit and diagnosed the problem. All correspondence and shipments should be sent to Univentor Ltd. or your Univentor representative.

Section 2 - INTRODUCTION

2.1 INTRODUCTION

The Univentor 810 and 820 Microsamplers are fraction collectors designed to collect and refrigerate liquid samples as small as 1 μl using the 820 Microsampler or 10 μl with the 810 Microsampler.

The Univentor 810 Microsampler operates with 10 plastic vials of 1.5 ml volume (Eppendorf type) in single mode.

The Univentor 820 Microsampler operates with 20 glass or plastic vials of 300 μl volume. It can collect 20 samples from one source (Single Mode), for example, a microdialysis probe or 2 x 10 samples from two sources (Dual Mode) at the same time. Either tubing or the stainless steel cannulas supplied with the Microsamplers can be used as collection cannulas. Septas may be attached to cap the vials when using the steel cannulas.



Figure 2.1. The Univentor 820 Microsampler

Both Univentor Microsamplers can operate as stand-alone instruments. An external TTL signal may be used to control the actions of the collectors. The Microsamplers also operate in conjunction with the Univentor 802 and/or 864 Syringe Pumps. The whole set can be computerised (using RS-232) enabling precise customised collections.

Section 3 - GENERAL

3.1. UNPACKING AND INSTALLATION

When you are ready to install the 810 or 820 Microsampler, remove the instrument from the shipping package and inspect both the instrument and the package for any signs of damage. If any damage is noted, contact the freight handler immediately, see section 1.2.

Missing Items?

Your microsampler is delivered with:

1. 1 power supply & mainslead.
2. 1 set cannulas for FEP-tubing.
3. 1 set cannulas for capped vials.
4. 1 tubing kit.
5. 5 sets plastic vials @ 300 µl (supplied with the 820 Microsampler only).

If any items are missing contact your Univentor representative immediately.

3.2. POWER SUPPLY

MAINS - Use an earthed wall plug and the adaptor 2401100 supplied with the 810 and 820 Microsampler. The adaptor can automatically handle input voltage in the range from 100V AC to 240V AC, 50 to 60 Hz.

3.3. CONTROL PANEL EXPLANATION

The following functions can be controlled from the panel of the Microsamplers.

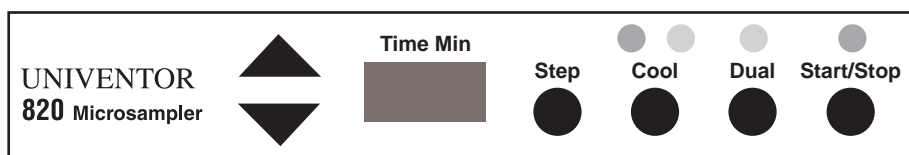


Figure 3.3:1 The Univentor 820 control panel

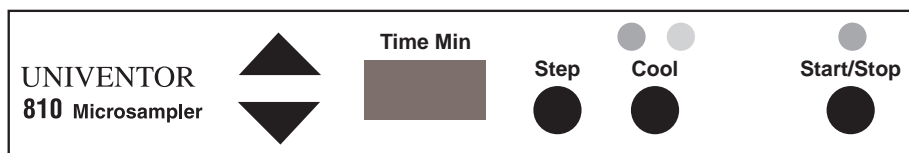


Figure 3.3:2 The Univentor 810 control panel

- Set time** Click the up arrow button to increase collection time in minutes. Use the down arrow button to decrease.
- Time min** Shows the time in minutes.
- Step** Press 'Step' to move the carousel stepwise. For continuous stepping hold down 'Step' button.
- Cool** Press button to start cooling. The yellow light switches on. The green light is lit when the set temperature has been reached (standard +8°C).

- Dual** Press button for dual collection, 2 x 10 samples. Yellow light is shown in dual mode.
- Start/Stop** Press 'Start/Stop' button to operate the instrument. When started, the display shows the remaining time for the sample being collected.

Section 4 - OPERATION

4.1. INSTRUCTIONS

1. Connect the instrument to the AC adapter.
2. Press 'Cool'. The Microsampler will start to cool down to its setting (standard +8°C) in approximately 20 minutes. The yellow light is switched on. The green light is lit when the temperature has reached its setting (standard +8°C). The green light flashes when maintaining the temperature.
3. Fill the carousel with vials. Turn the numerical ring until number 1 is in the collection position. Close the lid.
4. Insert the FEP-tubing (if capped vials are to be used, change to cannulas 2403019) into the tubing holder. The outlet tubing fits directly into the tubing holders which consist of a cannula and plastic sleeve. The tube from the probe is fed through the supporting cannula until it reaches the bottom of the collecting vial. Secure the tubing by lifting the plastic sleeve.
5. Preset the collecting time. Set the desired time in minutes by clicking the arrow buttons. The up arrow increases the value and the down arrow decreases the value. The maximum collection time is 99 minutes.
6. Start collection. By pressing 'Start/Stop' button collection of the first sample will start. The remaining time of the sample being collected will be shown on the LED display. Close the lid. When the preset value is reached, the instrument moves the cannula up and indexes to the next position. If 'Stop' is pressed the preset time in minutes will be shown in the display window.
7. In high humidity conditions, condensation may occur in the cooling department of the microsampler. This will be expelled through the condensation extractor.

4.2. REPLACING THE CANNULA

To replace the cannula release the corresponding knob and pull the cannula straight up. Insert the new cannula into the holder and make sure it is pressed all the way down before tightening the knob.

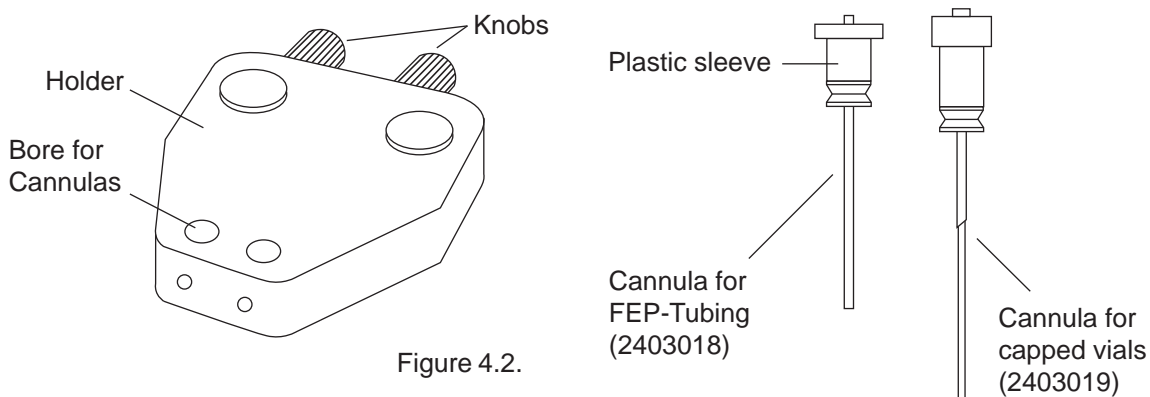


Figure 4.2.

4.3. REMOTE CONTROL CONNECTOR

The Univentor Microsampler has a DSUB connector for remote control.

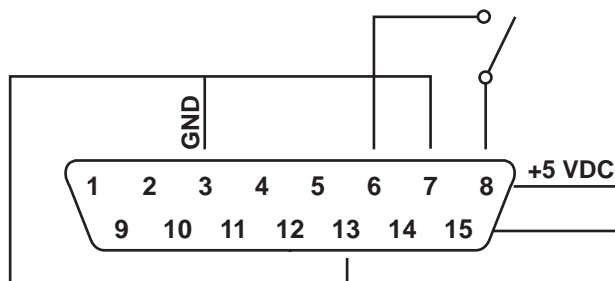


Figure 4.3:1 DSUB Connector

To activate remote mode:

Connect pin 7 of the DSUB to GND (pin 3) and then connect pin 15 to 5-12 VDC. Pin 8 may be used to supply 5 VDC.

When in remote mode the display will show 'cc'.

To trigger indexing:

Connect pin 13 of the DSUB to GND (pin 3) and briefly apply 5-12 VDC to pin 6. Pin 8 may be used to supply 5 VDC, a switch, such as the Univentor Foot Pedal, or an external TTL signal.

When using the Microsampler with the Univentor 802 or 864 Syringe Pump the whole set up may be computer controlled.

For further information refer to the 802 or 864 Syringe Pump manual.

Section 5 - ROUTINE MAINTENANCE

5.1. CLEANING THE INSTRUMENT

Keep your Univentor Microsampler clean. Wipe off any spillage using a soft cloth with mild detergent. Do not use alcohol or any other solvent.

5.2. STORAGE

If the Microsampler is not to be used for a significant length of time, it is recommended to disconnect the mains supply, clean the instrument and store it safely.

Section 6 - SPECIFICATIONS

Cat No:	810 Microsampler - 8303001 820 Microsampler - 8303002
Dimensions:	150(W) x 130(D) x 110(H) mm
Weight:	2.2 kg
Shipping weight:	4.5 kg
Power:	100-240 VAC / 50-60 Hz
Temperature control:	Standard: +8°C with room temperature not exceeding 28°C
Minimum stand alone collection time:	1 minute
Maximum stand alone collection time:	99 minutes
Remote control collection time:	According to trigger setting
Minimum collection volume:	810 Microsampler - 10 µl 820 Microsampler - 1 µl
Number of samples:	810 Microsampler 1-10 vials of 1.5 ml 820 Microsampler 1-20 vials of 300 µl

Section 7 ACCESSORIES & REPLACEMENT PARTS

CAT. No.	DESCRIPTION
8401425	Univentor Foot Pedal
2403018	Cannula for FEP-tubing
2403019	Cannula for capped vials
2401092	RS232 communication cable for computer control of 802/864 Syringe Pump and one 810/820 Microsampler
2401093	RS232 communication cable for computer control of 802/864 Syringe Pump and two 810/820 Microsamplers
7251001	Power Supply
7403005	Tubing Kit - 1 m FEP tubing and 2 adaptors
7403006	Plastic vials @ 300 µl - qty 100

We reserve the right to improve our instruments without notification.

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