ADVANTEC MFS, Inc.

FRACTION COLLECTOR

MICROCOMPUTER CONTROLLED

CHF121SA

CHF121SA HAS VERSATILE FUNCTIONS THAT SATISFY MOST OPERATING CONDITIONS.

MICROCOMPUTER CONTROLLED **SUPER FRACTION COLLECTOR**

EASY TO USE

No confusing commands to learn.

Operational parameters are set in a user friendly conversational format in plain English.

The Liquid Crystal Display (LCD) can be read in both daylight and darkroom conditions.

Easy to operate using its convex surface key top.

MORE FLEXIBILITY

The ADVANTEC Super Fraction Collector has the ability to collect microliter to liter size fractions directly into a variety of containers.

The standard test tube rack, which doubles as an ice bath, can collect up to 120 fractions in test tubes.

The CHF121SA has a height adjustment system that allows you to use test tubes or bottles up to 180 mm in height.

The self adjusting tapered test tube rack can accommodate test tubes from 12 mm to 18 mm in diameter.

Bottles can be organized in the test tube tray and large volumes can be collected using the “Bottle Mode”.

“BOTTLE MODE”

The CHF121SA stores up to 3 patterns of bottle arrangements in its memory. Each pattern can have up to 100 random positions in an order sequence that you set.

MODES OF OPERATION

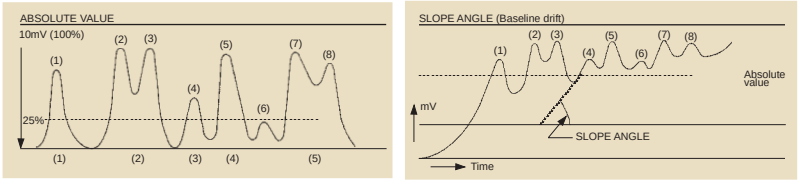
The CHF121SA features seven modes:
SIMPLE, MANUAL, PEAK, WINDOW, BOTTLE SIMPLE, BOTTLE PEAK, and BOTTLE WINDOW MODE.

SIMPLE MODE

Lets you collect either by: TIME, NUMBER OF DROPS, VOLUME, or EXTERNAL SIGNAL.

PEAK DISCRIMINATION

The CHF121SA allows you to discriminate between peaks by either ABSOLUTE VALUE (Threshold) or SLOPE ANGLE (Baseline drift).

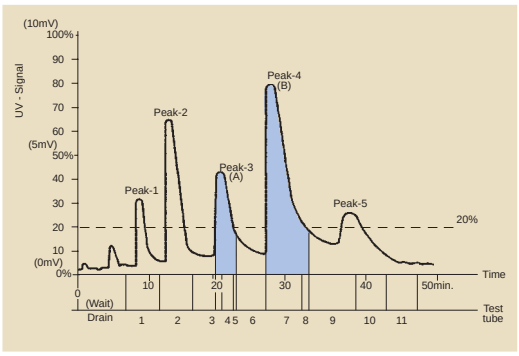


PEAK MODE

Collects assigned peaks based on time, absolute value, or slope angle.

Example:

- Discards the void volume to the drain for the first 7 min.
- Collects every 5 min/tube across the entire sample, except in the 3rd and 4th peaks.
- Collects every 2 min/tube in the 3rd (A) and 4th (B) peaks that the signal is more than 20% of full scale.

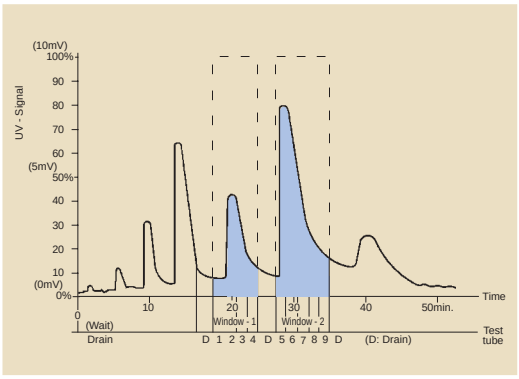


WINDOW MODE

Collects fractions during assigned time windows.

Example:

- Discards the void volume to the drain for the first 16 min.
- Except in the assigned time windows, discards the void volume to the drain across the entire sample.
  (WINDOW-1: 19 min 30 sec — 25 min 00 sec)
  (WINDOW-2: 27 min 30 sec — 34 min 30 sec)
- Collects every 1.5 min/tube in the WINDOW-1 and WINDOW-2.

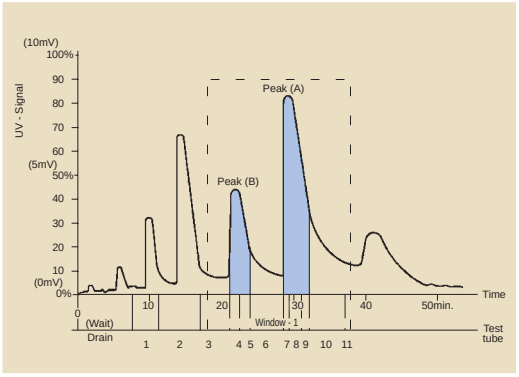


WINDOW + PEAK MODE

Collects peaks in the assigned time windows based on absolute value or slope angle.

Example:

- Discards the void volume to the drain for the first 7 min.
- Collects every 5 min/tube across the entire sample, except in the assigned time windows.
  (WINDOW-1: 19 min 00 sec — 38 min 00 sec)
- Collects every 1.5 min/tube in the peak (A) and peak (B) where the signal is more than 1.5mV/min in the time windows.



OPTIONAL ACCESSORIES

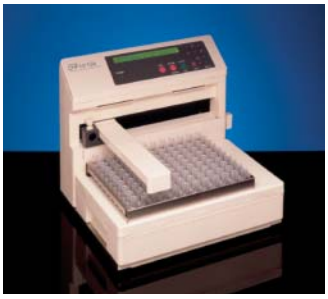
3-WAY VALVE (CH000050)

The optional **3-Way Valve (CH000050)** is used to prevent any sample drops from falling outside of the test tubes or collection vessels. This is accomplished by switching the sample flow path from the test tube side to the drain side while the dropper assembly is shifting.

EPPENDORF TUBE RACK (CH000090)

4 mL VIAL RACK (CH000206)

MICROPLATE RACK (CH000205)



Eppendorf Tube Rack (CH000090) is a rack that accommodates Eppendorf centrifuge tubes as the collection vessels. The Eppendorf rack holds both the tube and cap securely in place during collection.

4 mL Vial Rack (CH000206) is used when collecting multiple small volume samples.

MicroPlate Rack (CH000205) is for direct collection to 1 96-well microplate.

EPROM (8754025MP) is preset 1 96-well microplate alignment pattern.

4 Microplate Rack is also available. Please contact us for detail.

PREPARATIVE FUNNEL (CH000160)

PREP. FUNNEL RACK (CH000170)

PREP. TYGON TUBING (CH000180)

MOBILE CART (CH000115)

The **Preparative Funnel (CH000160)** and **Funnel Rack (CH000170)** allow the end user to collect fractions in large volume containers.

The prep funnel is simply an adapter that directs the flow of the fraction from the set point through tubing to the collection vessel.

Each prep funnel can accommodate up to 30 fractions. The funnel rack can hold a maximum of 4 funnels yielding a maximum of 120 samples.

SPECIFICATIONS

FRACTION

TEST TUBE	120 tubes (12-18 mm diameter x 90-180 mm height)
MODE	Simple, Peak, Window, Manual, Bottle
NOZZLE SHIFTING TIME	Typically 0.1 second (center to center)
BOTTLE ARRANGEMENT	All random patterns are available. Stores three patterns (100 positions/pattern)

MODE, PARAMETER

SIMPLE {OPEN COLUMN} MODE

TIME	99 minutes 59 seconds / tube
DROP	9999 drops / tube
SIGNAL	9999 counts / tube
VOLUME	999.9 mL / tube

PEAK {MULTI-SAMPLE} MODE

END TIME	999 minutes
FRACTION PEAK	10 peaks
FRACTION CAPACITY	99 minutes 59 seconds / tube
VOID VOLUME DISCARD	99 minutes 59 seconds / tube

WINDOW {MULTI-SAMPLE + PEAK} MODE

END TIME (WINDOW)	999 minutes 59 seconds
FRACTION WINDOW	10 windows
FRACTION CAPACITY	99 minutes 59 seconds / tube
VOID VOLUME DISCARD	99 minutes 59 seconds / tube

MANUAL MODE

BOTTLE SIMPLE MODE {Refer to SIMPLE MODE}

BOTTLE PEAK MODE {Refer to PEAK MODE}

BOTTLE WINDOW MODE {Refer to WINDOW MODE}

WAIT TIME SETTING	99 minutes 59 seconds (MAX)

PEAK PARAMETER

PEAK LEVEL	100% (MAX)
PEAK SLOPE	10.00 mV / minute (MAX)
NOZZLE MOVEMENT	
DELAY TIME	9 minutes 59 seconds (MAX)

INPUT / OUTPUT SIGNALS

EVENT MARKER OUTPUT	One fraction marker ON-OFF
CHROMATO SIGNAL INPUT	10 mV (Full Scale)
EXTERNAL START INPUT	ON Start
EXTERNAL END INPUT	ON End
EXTERNAL SIGNAL INPUT	ON Count

DIGITAL SIGNAL

SIGNAL INTERFACE	RS-232C
	(9 Pin connector)
	1200 BPS

ELECTRICAL & GENERAL SPECIFICATIONS

CLOCK	Crystal Oscillator
OPERATION PARAMETER MEMORY	Backed up by Ni-Cd battery
POWER SUPPLY	AC 90 V TO 260 V, 50/60 Hz
OPERATING TEMPERATURE	2 - 40 °C
DIMENSIONS	W 355mm x D 340 mm x H 310 mm
WEIGHT	Approx. 7.0 Kg (15.43 lbs.)

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