

# FC Jr. Fraction Collector



FC Jr. holds microcentrifuge tubes to 125 mL Erlenmeyers, and easily stretches to hold tubes up to 150 mm tall. The most-used test tube sizes are 13 x 100 (8 mL) and 18 x 150 (24 mL). FC Jr. holds 144 and 72. The most popular competing fraction collector takes up more space but holds only 105 of the smaller tubes, and none at all of the larger tubes!

## Easy-to-use versatility

**Choose left-to-right or serpentine collection pattern:** racks are numbered to locate tubes easily with either method. To save glassware handling, you can use time window programming to divert the initial void volume before filling the tubes. At the specified last tube, the pump shuts down and the dispensing head returns to the waste position.

For prep HPLC with low-capacity columns, it's easy to overlay re-injections of one sample a number of times, pooling the same peaks in the same tubes. While not as capable as FC I, FC Jr. still gives rare versatility for most jobs.

**Setup is quick and error-free.** Snap-action keys and shallow-sloped keyboard make programming sure and comfortable. FC Jr.'s display with adjustable contrast is easiest to read, and no-detour programming avoids unnecessary keystrokes. Simple, straightforward menu choices are displayed at each step above the five "softkeys." Quick recall of up to 9 stored methods saves time and prevents errors. FC Jr. interfaces easily with detectors, pumps, autosamplers, and software. Serial communications lets you transfer or print collection protocols or control FC Jr. from your personal computer.

**Automate your entire LC system** from the FC Jr. keypad, using an optional valve controller. Program up to 40 timed on or off control events using up to 6 valves and 2 pumps. You can switch solvents or buffers; generate gradients with a pump; inject samples; and regenerate or backflush columns. An optional printer documents the entire method for validation reports.

## Collect fractions 4 Ways

**Collect uniform fractions by time, drop count, or pumped volume.** Just pick a collection method from the menu, then

enter the time or drop count per tube and number of tubes desired.

**Collect peaks.** FC Jr. lets you choose three methods to identify and separate peaks. Use them individually, or in combination to select only the peaks, or peak portions, you want.

- Slope detection identifies peaks by their shape. FC Jr. analyzes the signal from an absorbance or other LC detector to give you the most accurate peak separation available.
- Use level sensing to collect peaks above a selected detector signal threshold. This simplified method is useful for collecting only the most concentrated part of the peak, or grouping partially resolved peaks in a single fraction.
- Time windows collect important fractions by known retention time. Use time windows combined with slope or level sensing to select only certain desired peaks, diverting other peaks and baseline effluent to waste.

During peak collection, a fresh tube is utilized at the beginning and end of each peak to avoid dilution. Or you can collect only peaks, diverting baseline effluent elsewhere via the waste trough or a diverter valve.

Fraction collection is delayed an adjustable amount to compensate for the passage of eluent from the detector cell to the collection tube. Peaks are always in the right tubes, and event marks are always in the right place on the chromatogram.

## Less bench space. More tubes. Largest variety of tubes, vials, and flasks

**Rigid, warp-proof racks** hold test tubes from 12 to 25 mm diameter; 1.5 and 50 mL centrifuge tubes: 28 mm or mini



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scintillation vials; and even 96-well microplates. Numbered positions help you locate fractions easily.

For large preps, put 9 flasks directly on the tray, collecting only desired peaks and diverting the rest to waste. No rack is needed.

If you have a really giant job, you can use the funnel rack to distribute effluent to 36 remote vessels of unlimited volume.

This rack handles flow rates up to 100 mL/min with valving between fractions, or 1 liter/min of non-foaming liquids without valving.



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## You can trust FC Jr.

**Thrives in your coldroom.** Cold and condensation-proof design using continuous warming protects internal components in humid environments, even when FC, Jr. is turned off. And its 28 cm width often fits it where other collectors can't go. Another plus for high humidity operation is greatly reduced shock hazard: FC Jr. operates on 14 volts supplied by a calculator-type transformer on the wall end of a thin, low-voltage cord that's easy to route past your refrigerator door gasket.

**FC Jr. prevents spills** of your valuable or radioactive samples with its fast transit time between tubes, optional valves to stop or divert flow between tubes or at the end of the run, and automatic pump shut-off at the end of the run. For even more security, optional polypropylene funnel trays for 12 or 13 mm racks prevent lost drops even in a drafty cold room. But if a spill happens anyway, the large drip pan with drain will control it. Chemical-resistant materials are unfazed by common solvents; internal shields give added protection to electronics and mechanical parts. High holding torque on the dispensing head prevents loss of position from accidental bumps.

*This fraction collector has the most intelligence, largest tube capacity, and the smallest size in its class.*

**Capacity:** (144) 12 or 13 mm tubes; (100) 16 mm tubes; (72) 18 mm tubes or MiniVials; (60) 1.5 mL microcentrifuge tubes; (36) 25 mm tubes, 28 mm scint. vials, 29 mm cone-bottom centrifuge tubes, or funnels for remote collection; (9) 125 mL Erlenmeyers, 150 mL beakers, or 250 mL bottles; and (2) 96-well microplates. Maximum tube length 150 mm.

**Fraction timer range:** 1 second to 99 hr:59 min:59 s

**Drop counter range:** 1 to 999,999

**Volume counter range:** 1 to 999,999 volume units

**HPLC programming:** Selectable overlay of multiple injections for one sample

**LC interfacing:** Serial (RS232): analog 10 mV, 100 mV, and 1V detector input for peak collection; contact closure I/O; timed-based valve/accessory control

**User memory:** Stores 9 complete programs, with battery backup

**Peak detection:** By slope and/or level; can be combined with time windows.

**Time windows:** Up to 10 time intervals per program

**Wetted components:** Halar<sup>®</sup> drop former; polypropylene waste funnel and drip pan

**Tube change time:** 200 to 450 ms center-to-center, depending on tube size; selectable acceleration

**Even mark output:** Open collector, 300 ms duration.

**Temperature range:** 0 to 40°C

**Dimensions:** 28 cm W x 27 cm H x 31 cm D; 4.7 kg

**Power required:** 100/117/234 Vac, 50/60 Hz. Specify. 25 watts max.

## Ordering Information

One rack for 13 mm tubes included. Other racks can be substituted. Order additional racks as needed.

Pumps can be connected only for end-of-run shutdown.

Cables to connect FC Jr. to other instruments must be ordered separately. Interface cable IS-68-1010-119 is required for external control of FC Jr. by a computer or any system with contact closures.

Description Number	Part
FC Jr. with one rack for 13 mm tubes	IS-683870-001
Spare parts package	IS-683879-100
Security valve, up to 100 mL/min.	IS-683877-002
Diverter valve, up to 100 mL/min.	IS-683877-001
Extra rack for:	
(144) 12 mm dia. tubes	IS-682137-041
(144) 13 mm dia. tubes	IS-682137-042
(60) 1.5 mL microcentrifuge tubes	IS-682137-048
(100) 16 mm dia. tubes	IS-682137-043
(72) 18 mm dia. tubes	IS-682137-044
(72) MiniVials	IS-682137-047
(36) 28 mm dia. scintillation vials	IS-682137-046
(36) 25 mm dia. tubes	IS-682137-045
(36) 50 mL cone-bottom centrifuge tubes, 28-29 mm diameter x 150 mm	IS-682137-064
(2) 96-well microplates	IS-683877-006
Prep rack with 36 funnels for remote containers	IS-683877-003
Funnel tray for 12 or 13 mm racks. Prevents lost drops. Polypropylene. Pkg of 10	IS-682137-013
Microcollection tray with (72) 0.6 mL conical wells. Polypropylene. Use in pairs, with 12 or 13 mm rack. Pkg/10	
Valve controller for programming additional valves & pumps. With cable for FC Jr.	IS-682137-069
Valves for above controller only	
On-off, standard flow (100 mL/min)	IS-682137-053
3-port, standard flow (100 mL/min)	IS-682137-050
On-off, high flow (several liters/min)	IS-682137-055
3-port, high flow (several liters/min)	IS-682137-054
Interface cable for external control of FC Jr. by contact closure of TTL I/O	IS-681010-119
Serial cable. Connects FC Jr. to computer for bidirectional RS232 communication	IS-480-2595-00
Method documentation printer. Requires cable below.	
Printer cable	IS-681020-503

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