

Dose Calibrators

The Path Towards Multi-Functionality Starts Here

CRC®-Ultra Dose Calibrator

Design a Calibrator Setup with Your Department's Specific Needs in Mind! Finding the perfect combination for your department is quick and simple with the CRC®-Ultra. Call a Capintec representative today to learn more about the optimal choices for your department's field of expertise!

The flexible configuration of Capintec Beta Detector, Well Counter, and field upgradeable Ion and PET chambers creates an endless possibility of combinations.

The CRC®-Ultra can also combine both standard 12 atmosphere and 5 atmosphere PET chambers, and uses the same outstanding proprietary sealed and pressurized Capintec chambers.

Whether you plan to operate a small setup or something on a grand scale, look to the future with the CRC-Ultra's expansive capabilities. By simply connecting additional units, the CRC-Ultra can adapt to changes as quickly as your department does!

Connect additional remote displays and Printers for enhanced functionality. The intelligent remote display unit is controlled by the CRC®-Ultra Dose Calibrator. It switches up to (8) pre-set nuclides independently for each chamber, measures bias voltage, Auto Zero, Auto Background, and performs accuracy tests. The remote can be located as far as 100 feet from the main unit.

The Epson roll printer makes an excellent companion to the CRC-Ultra. Compact and ideal in locations where space is a minimum, it uses an easily accessible ribbon cartridge that prints red or black. The CRC-Ultra also accommodates Okidata, HP Deskjet, and Epson Stylus printers with USB interface.



- **CRC®-Ultra: Readout Unit:** The CRC®-Ultra's comprehensive automated QC includes linearity, geometry and strip tests, and a complete inventory and dispensing module for unit or multi-vial doses. Design includes tilting display, user adjustable backlight, easy to read keypad and audible feedback on keypress. Height: 6 in. (15.2 cm); Width: 10.9 in. (27.6 cm); Length: 10 in. (25.4 cm); Weight: 4.2 lbs. (1.9 kg); Power Requirements: 110 to 240 VAC, 0.5A, 50/60 Hz
- **CRC®-Ultra: Expansion Unit:** The expansion module is necessary for combinations that utilize more than two Ion Chambers (contains ports for 6 additional Chambers). Height: 3.7 in. (9.4 cm); Width: 10.9 in. (27.6 cm); Length: 10.6 in. (27.0 cm); Weight: 2.6 lbs. (1.2 kg)
- **Additional Units: Chamber Assembly:** The CRC®-Ultra can combine both standard 12 and 5 atmosphere PET chambers. Additional chambers are field upgradeable. Suitable for most BT applications with appropriate source holder. Height: 18 in. (45.7 cm); Weight: 28.3 lb. (12.8 kg); Diameter: 6.75 in. (17.2 cm)
- **Additional Units: Well Counter:** The CRC®-Ultra's Well Counter option includes both wipe and lab tests. Height: 9.4 in. (23.8 cm); Weight: 15.2 lbs. (6.9 kg); Diameter: 6 in. (15.2 cm)
- **Additional Units: Beta Detector:** The CRC®-Ultra's Beta Detector option is optimized for high energy beta measurements. Height: 5.6 in. (14.1 cm); Weight: 3.3 in. (8.4 cm); Length: 18 in. (45.7 cm); Weight: 18.6 lbs. (8.4 kg)

ITEM #	DESCRIPTION
5130-3209	CRC®-Ultra Readout Unit
5120-2268	CRC®-Ultra Expansion Unit
5130-2210	Chamber Assembly (Ion)
5130-2212	Chamber Assembly (PET Ion)
5130-2214	Well Counter
5130-2213	Beta Detector

ULTRA SOFTWARE FEATURES

- QC Module: Auto Zero, Auto Background, bias voltage, accuracy, constancy, linearity, geometry; one, two, or three strip models; Moly assay-CAPMAC or canister; Self diagnostics and reference data records
- Inventory: Maintains decay corrected inventory levels, generates dose tables, calculates multi-dose vials and unit doses
- Nuclides: Over 200 calibration numbers available; 80 nuclides with stored calibration numbers and half-lives for decay calculations; User can modify calibration numbers for geometry corrections; Up to 8 preset keys; Up to 9 user definable keys
- Utilities: Activity units in either Ci or Bq, with lock out feature; Decay calculation; Ci to Bq conversion; Future time calculations
- Remote: Dual LCD display; Switch up to eight preset nuclides independently for each chamber, Measure bias voltage, Auto Zero, and Auto Background; Perform accuracy test
- Well Counter: Auto-calibration includes energy calibration and constancy; Displays net counts with automatic background subtract; Six channel fixed MCA; User-definable wipe test protocols; Counting error displayed; Trigger limits to flag high values; Schilling, Blood Volume and RBC Volume lab tests
- Beta Counter: Auto-calibration includes energy calibration and constancy; Displays net counts with automatic background subtract; Six channel fixed MCA; Stores reference, vial, and syringe correction factors for each nuclide; Stores efficiencies for both 10 cm and 20 cm locations; Count rate corrections
- Interface: RS-232 or USB bi-directional ports; Software controlled switching features
- PC Features: Change isotope for any chamber in system; Select chamber displayed on main unit; Request measurement value for any chamber; Perform background, zero, bias voltage, and daily test; Export data to database; Measure wipe test value from Well counter; Measure activity from Beta counter; Enhanced PC control allows user to control readout through the PC

ULTRA HARDWARE SPECIFICATIONS

- Dose Calibrator: Thin walled, pressurized, deep well re-entrant ionization chamber; Ultra Pure Argon fill gas; Electronic bias supply; Measurement Range (Auto Ranging); Maximum Activity: 300 GBq (8.0 Ci in Moly Assay Cannister) for standard 12 atm chambers; 500 GBq (12 Ci) for PET chamber; Maximum Resolution: 0.001 MBq (0.01 uCi) 0.01 MBq (0.1 uCi) for PET chamber; Measurements will repeat to within +/- 0.5% within 24 hours during which time the calibrator is powered at all times; Electrometer Accuracy < 2%, linearity +/- 2%, response time: 2 Seconds; 12 foot standard cable length, optional extension cables up to 200 feet
- Well Counter: Type: 1 ½ inch Sodium Iodide (NaI) drilled-well crystal detector; Energy Discrimination: Fixed range MCA windows are 15-100, 100-200, 200-400, 400-660, 660-800, 800 keV; 2.7 m (9 ft) triax cable; Shielded with 1.3 cm (½ in.) painted lead including top shield; Optional auxiliary ½ in. lead shield available
- Beta Counter: Thin Sodium Iodide (NaI) scintillator optimized for bremsstrahlung sensitivity; Sample Distance: 10 cm (4") and 20cm (8"); Counting Rate: 50,000 counts per second, max. (25 to 100m Ci pure beta emitter); Shielding: 1.3 cm (1/2 in.) lead collimator; 2.9 m (9.5 ft) triax cable; Optional auxiliary ½ in. lead shield available
- Multiple Chambers: Up to two chambers, well detector and beta detector connect directly to readout; Additional chambers require an expansion unit



OPTIONS

Acrylic L-Beta Shield	5130-2083	Ba-133 vial/250 µCi	0975-0002	Pin-Tec™ Syringe Shield: 5cc	4300-0036
Mini Clear-pb® L-Block Shield (Mini)	5730-0033	Co-60 vial/100 µCi	0975-0001	Pin-Tec™ Syringe Shield: 10cc	4300-0037
Mini L-Block	5130-2086	CAP-MAC-S Molly Assay Canister for Syringes	5130-2046	Epson Roll Printer	5430-0058
511 L-Block Shield	5130-2090	Molly Assay Canister	5130-0006	Epson Ticket Printer	5430-0100
Mounting Flange	7310-2307	Chamber Well Insert	7300-2004	CAP-MAC® -2: Mallinckrodt	5130-0108
CRC® -MF Chamber Mounting Flange	7300-2785	Vial/Syringe Sample Holder	7310-2005	CAP-MAC® -2: NEN/Dupont	5130-0109
Co-57 vial/3 mCi	0975-0573	I-125 Cartridge Holder	5120-1238	CRP-200 Dose Tickets & Labels	7120-1199
Co-57 vial/5 mCi	0975-0006	C-Tec™ Syringe Shields: 1cc	4300-0030	CRP-500 Radionuclide Dose Tickets	7120-1016
Co-57 vial/10 mCi	0975-5710	C-Tec™ Syringe Shields: 3cc	4300-0031	CRP-600 Radiochemical Purity Tickets	7120-1018
Cs-137 vial/100 µCi	0975-0002	C-Tec™ Syringe Shields: 5cc	4300-0032	CRP-700 Pre-Cal Record Tickets	7120-1017
Cs-137 vial/200 µCi	0975-3720	C-Tec™ Syringe Shields: 10cc	4300-0033		
Cs-137 vial/250 µCi	0975-3725	Pin-Tec™ Syringe Shield: 1cc	4300-0034		
		Pin-Tec™ Syringe Shield: 3cc	4300-0035		