BECKMAN COULTER

Tailored automation solutions that fit

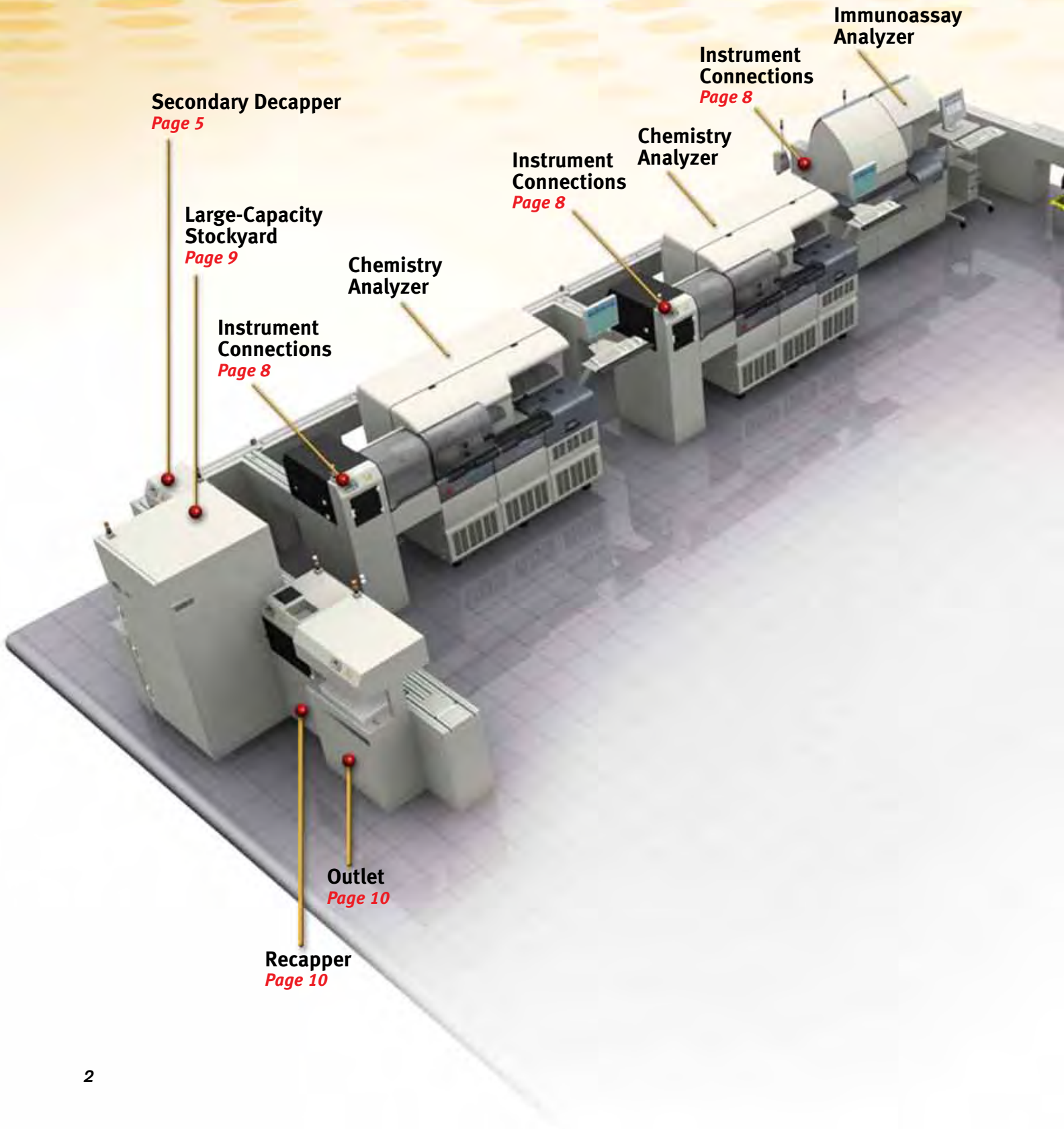
Automation system solutions component overview

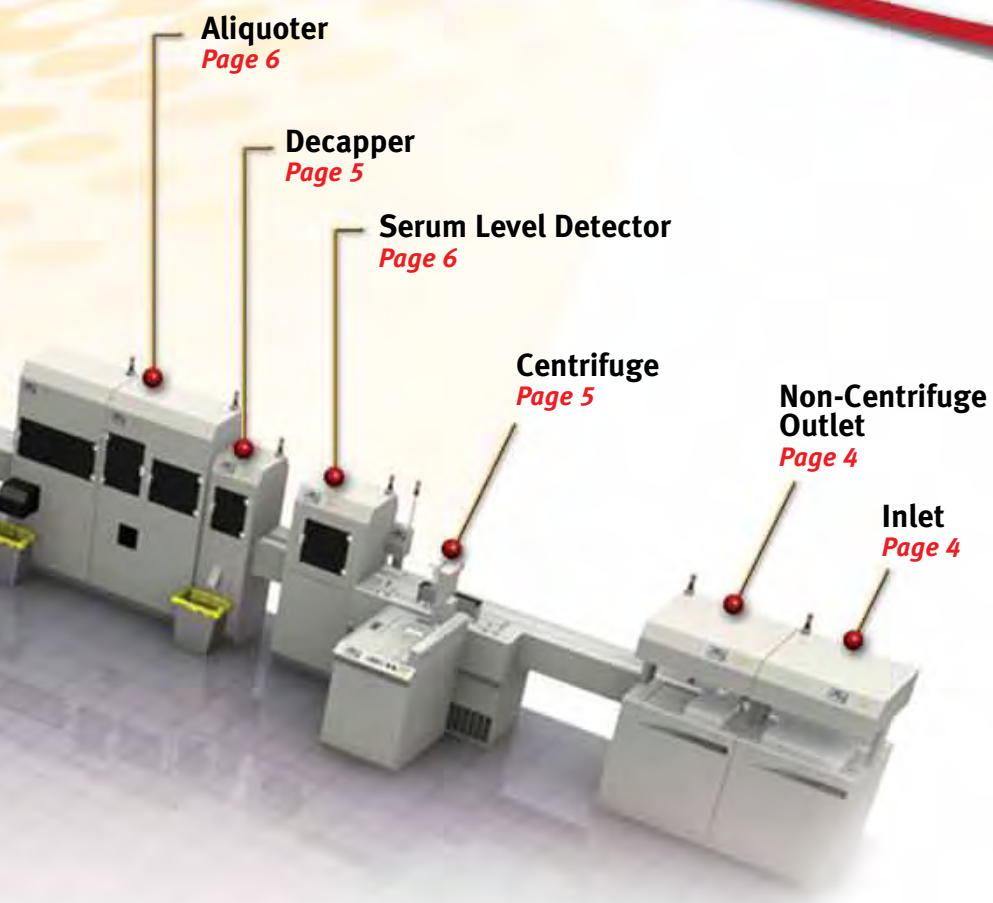
Blood Banking
Centrifugation
Chemistry
Flow Cytometry
Hematology
Hemostasis
Immunoassay
Information Systems
Lab Automation
Molecular Diagnostics
Rapid Diagnostics

BR-12060C

Simplify and automate.

With automation system components.





Efficiency/Productivity.

Improving the process at every level.

In the dynamic world of healthcare, we are forced to do more with less. Simplifying and automating processes in your laboratory are among the best ways to meet that challenge. Beckman Coulter helps your lab maximize the productivity of your current resources and improve your turnaround time with progressive automation solutions, tailored to fit your unique laboratory needs. We offer a full spectrum of automated sample handling systems.

Our progressive approach allows your lab to take advantage of the benefits of automation in incremental, flexible steps that make the most impact in your laboratory. For some laboratories, that means building a system of workstation components to create a custom solution that delivers the highest levels of efficiency, speed and cost savings.

- Choose from a variety of automated modules
- Leverage existing instrumentation through open-system design

Inlet

This new Dynamic Inlet has specialized racks, enabling users to prioritize STAT samples over routine samples, bypass the centrifuge for samples that have been pre-spun and remap tubes to the stockyard for archiving. This is available as a upgrade to your existing Power Processor or as an option on new Power Processors.

An Inlet unit receives samples for loading onto the transport system. Specimens are picked up from 50-position racks and loaded into the individual tube holders on the processing line. Manual and automated modes allow the Inlet to be interrupted to introduce stat samples. Inlet units load mixed tube types and heights from the racks to tube holders. Four racks are loaded at a time (200 samples total).

Dimensions	**H**	**W**	**D**	**Wt**
5-Gripper Inlet	1,355 mm 53.4 in	800 mm 31.5 in	590 mm 23.2 in	110 kg 242.5 lbs
Dynamic Inlet	1,503 mm 59.2 in	800 mm 31.5 in	600 mm 23.6 in	131 kg 288 lbs

Capacity	**Samples**	**Samples/hr**
5-Gripper Inlet	200	700
Dynamic Inlet	200	450

Specimen Racks	
Source	Beckman Coulter
Capacity	50 specimens/rack
Depth	126 mm (~ 4.96 in)
Length	265 mm (~ 10.43 in)
Height	65 mm (~ 2.56 in)

Tubes	
Diameter	13 mm
Length	75 or 100 mm

Non-Centrifuge Outlet

- Sorting of tubes requiring whole blood analysis or pretreatment
- Intermixed 13 x 75 mm and 13 x 100 mm sample tubes
- Ability to sort to Beckman Coulter LH or DxH Hematology Analyzer Personality Racks
- Automatic sample receiving message to LIS

Dimensions	**H**	**W**	**D**	**Wt**
Non-Centrifuge Outlet	1,355 mm 53.4 in	800 mm 31.5 in	670 mm 26.4 in	120 kg 264.6 lbs

Centrifuge

- Centrifugation of sample tubes
- Additional Dual Centrifuge Upgrade available for improved system throughput
- Load balancing for the centrifuge

Rotational Speed	3,000 rpm (max)
Rotational Force	2,100*g* (13 x 100 mm tubes)
Load Capacity	Up to 40 tubes/spin

Dimensions	**H**	**W**	**D**	**Wt**
Centrifuge	1,120 mm 44.1 in	590 mm 23.2 in	795 mm 31.3 in	215 kg 474.0 lbs

Capacity	**Samples/hr**
Centrifuge	300/hr (450/hr Dual) (with 4 minute spin time)

Primary and Secondary Decappers

The Decapper allows the system to operate with rubber or plastic caps (Hemogard-type). Caps are removed without creating potential hazardous aerosols and directly disposed of into a biohazard container.

Samples requiring additional testing are removed from the Stockyard and routed to a Secondary Decapper, where the cap is removed before the tube returns to the respective analyzer(s).

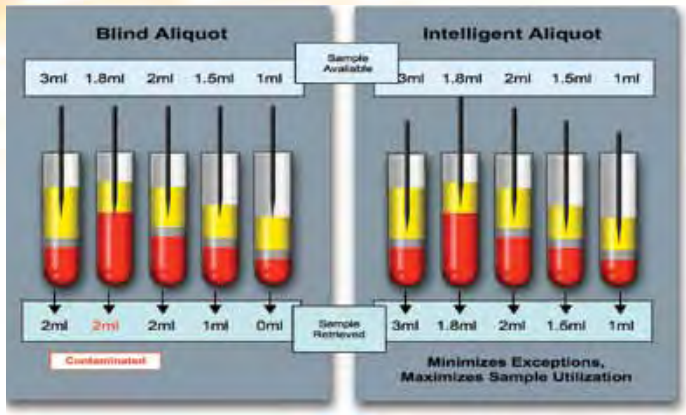
Dimensions	**H**	**W**	**D**	**Wt**
Primary Decapper	1,355 mm 53.4 in	400 mm 15.8 in	350 mm 13.8 in	55 kg 121.3 lbs
Secondary Decapper	1,355 mm 53.4 in	400 mm 15.8 in	350 mm 13.8 in	55 kg 121.3 lbs

Samples/hr
700 (rubber, plastic)

Aliquoter System

Beckman Coulter's Intelligent Aliquotting system ensures maximum serum utilization and minimizes sample contamination by determining the proper volume to be transferred based on the test requested.

To minimize sampling errors and short draws, the Intelligent Aliquoter System determines the total available sample volume and aspiration depth. The aliquot volumes are then calculated, based on the number of tests ordered and the corresponding analyzer dead volume. The system will set priority for aliquots, help operators identify short samples early and minimize serum waste, enabling you to do more with less.



Serum Level Detector

Samples are transferred to the Serum Level Detector after centrifugation.

Sample tubes are lowered into an optical well, five at a time – and the volume can be measured through labels (up to three labels thick). The serum volume is calculated in the Aliquot Unit.

Dimensions	**H**	**W**	**D**	**Wt**
Serum Level Detector	1,355 mm 53.4 in	600 mm 23.6 in	495 mm 19.5 in	84 kg 185.2 lbs

Capacity	**Samples/hr**
Serum Level Detector	600/hr maximum

Secondary Tube Labeler

The Secondary Tube Labeler prints a bar-code label and applies it to each aliquot tube, thus minimizing human-based labeling errors and non-value added tasks.

The bar code of each secondary tube is verified by the system before it is accepted for use. Tubes with defective bar codes are discarded and new tubes are prepared. The label may also contain human-readable text for easy reference by the operator. Human-readable text is usually an alpha-numeric representation that can include the patient ID and test(s) requested.

Dimensions	**H**	**W**	**D**	**Wt**
Tube Labeler	1,555 mm 61.2 in	900 mm 35.4 in	396 mm 15.6 in	130 kg 286.6 lbs

Methods	
Tube Supply	Rack
Printing	Thermal transfer
Label Application	Rubber Roller Take-up

Aliquot Unit

This component is designed for laboratories that prepare secondary aliquot tubes from primary serum sample tubes. Pipette tips on two robotic arms transfer serum from the primary to the labeled secondary tubes. After aliquoting is completed, the primary tube is directed to an analyzer or an outlet unit. Secondary aliquot tubes are sent to instruments, workstations, or outlets for removal, storage or testing.

Dimensions	**H**	**W**	**D**	**Wt**
Aliquot Unit	1,555 mm 61.2 in	800 mm 31.5 in	396 mm 15.6 in	135 kg 297.6 lbs

Capacity	**Samples/hr**
Aliquot Unit	420 samples/hr

Tip	**Aspirated Sample Range**
5.0 mL	0.3 - 3.0 mL

Instrument Connection

The Power Processor automation system supports both direct-track sampling and rack-builder connections, depending on the analyzer type. Connections to Beckman Coulter's wide portfolio of UniCel Synchron clinical chemistry and immunoassay analyzers or highspeed AU clinical chemistry platforms allow laboratories to connect analyzers that are the best fit for their evolving workflow requirements.

Large-Capacity Stockyard

Large-capacity Stockyards are specialized refrigerated outlet units (operating between 2-10° C) that can store samples for a configurable period of time, based on laboratory workflow needs. Stockyards have racks that each hold 340 samples. Our 3,060 sample capacity Stockyard has three levels of storage, each holding three racks.

Completed samples arrive at the Stockyard and are unloaded from the sample carriers (tube holders) one at a time and placed into racks. Computer-controlled placement of samples within the Stockyards ensures that each sample's location is mapped and sample life is monitored automatically. The location list of any sample in the Stockyard can be printed. Samples recalled from the Stockyard can automatically return to the automation line without any manual intervention for reflex or rerun tests. If manual preparation of the sample is required, samples can be directly recalled to the outlet module. For increased productivity, Stockyard operation is continuous – with racks removed as they become full and replaced with empty racks.

Dimensions	**H**	**W**	**D**	**Wt**
Large Stockyard	2,600 mm 102.4 in	790 mm 31.1 in	865 mm 34.1 in	460 kg 1014.1 lbs

Capacity	**Samples**
Large Stockyard	3,060

Tubes	
Diameter	13 mm
Length	75 or 100 mm

Specimen Racks	
Capacity	340 specimens/rack
Depth	210 mm (~ 8.27 in)
Length	660 mm (~ 25.98 in)
Height	85 mm (~ 3.35 in)

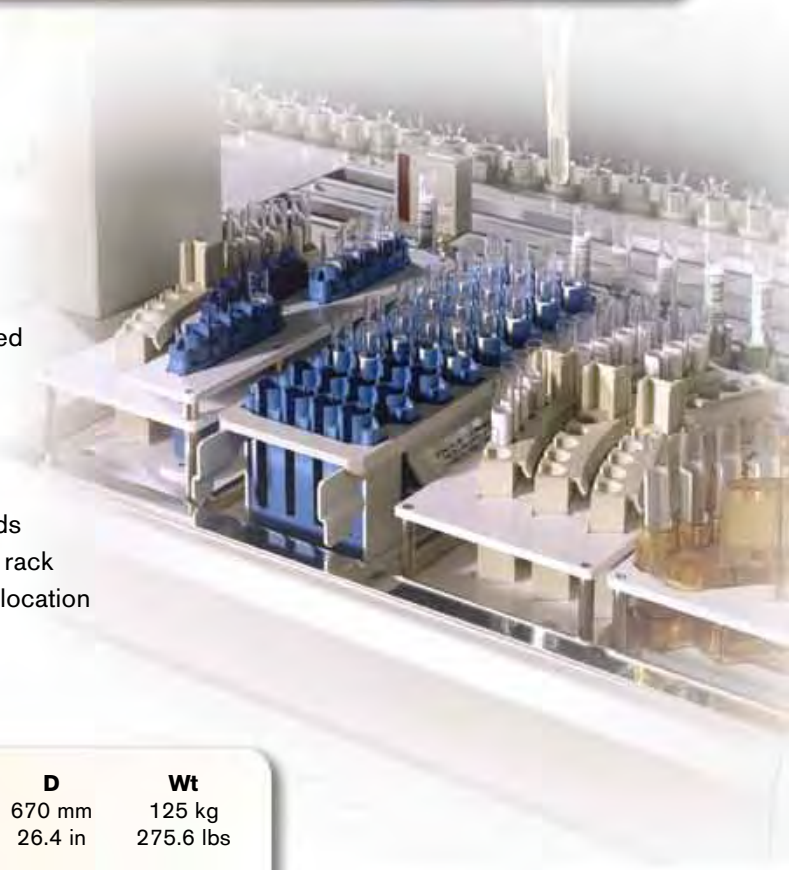
Recapper

Before storage, the tubes may receive a clean cap to prevent serum evaporation during storage.

The Recapper includes a hopper for bulk storage of the plastic caps, a shaker table that feeds the caps one at a time and a robotic hand that places the caps on the tubes and presses them securely into place.

Dimensions	**H**	**W**	**D**	**Wt**
Cap Replacement Unit	1,275 mm 50.2 in	590 mm 23.2 in	600 mm 23.6 in	95 kg 209.4 lbs

Capacity	**Samples/hr**
Recapper	700



200-Tube Outlet Unit

Completed samples are removed from the system at the Outlet Unit. Outlet Units provide a location from which primary samples or aliquots are removed for testing in other labs or on non-connected instruments.

Samples arrive at an outlet and are unloaded from tube holders and placed into racks. Each rack holds 50 samples. Each outlet holds four racks. When a rack is full, the operator is alerted to remove it. Sample location is mapped within the rack and outlet, and location lists may be printed.

Dimensions	**H**	**W**	**D**	**Wt**
Standard Outlet	1,355 mm 53.4 in	800 mm 31.5 in	670 mm 26.4 in	125 kg 275.6 lbs

Capacity	**Samples/hr**
Standard Outlet	Sorts 375 samples per hour

PrepLink Software for Power Processor

Beckman Coulter's exclusive PrepLink software enables communication between the LIS, the Power Processor Automation Line Controller and connected analyzers, for optimized TAT and operational efficiency from a single computer station.

Intelligent load balancing and routing to connected analyzers

- Interpret LIS orders and develop the optimal routing / load balancing plan
- Manage multiple analyzers and test menus
- Dynamic routing of tubes to appropriate analyzers*
- Real-time information* available including:
  - Analyzer status
  - Analyzer reagent status
  - Analyzer reagent level
  - Test complete notification

Automatic error handling on connected analyzers

- Handle sample based errors
- Handle non-sample based errors
- Resolve test pending and no test result scenarios

Hands-free sample retrieval

- PrepLink enables operators to automatically find, retrieve, retest and place a sample back into storage, completely hands-free from a single computer console.

*Note: "Dynamic" functionality available exclusively on Beckman Coulter analyzers.

For Beckman Coulter's worldwide office locations and phone numbers, please visit **www.beckmancoulter.com/contact**

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