

# New Standard for Turnaround Time with Comprehensive Quality Detection

## A new standard in turnaround time with comprehensive quality detection.

In today's healthcare environment, laboratories are highly focused on enhancing patient care by driving faster turnaround time (TAT), delivering quality results and improving laboratory operations. The DxA 5000 helps laboratories meet these challenges through patented innovations that deliver rapid and consistent TAT, provide a new level of comprehensive pre-analytical sample-quality detection, and reduce up to 80% of the manual steps<sup>1</sup> associated with processing a patient sample to significantly improve laboratory efficiency.



## **Quality detection**

When up to 75% of lab errors occur pre-analytically,<sup>2</sup> all laboratories could benefit from comprehensive workflow automation. Beckman Coulter's unique sample quality detection uses the industry's most comprehensive pre-analytical specimen check to inspect nine sample parameters within three seconds of touching each tube.



- Read the barcode label
  Measure sample tube size
  Identify container type
  Identify container cap type
  Identify container cap color
- 6. Measure the fill level
- 7. Measure sample volume
- 8. Calculate sample weight
- 9. Conducts pre-spun status check<sup>3</sup>

## Predictable turnaround time

Workflow optimization for multiple tube sizes, intelligent routing and advanced informatics enable short, consistent TAT by eliminating the need for differentiated STAT management.

- Smart retrieval from inlet and unloading from centrifuge gives STAT tubes priority
- Four-minute, universal centrifugation protocol that can reduce the pre-analytical processing time for connected analyzers across multiple disciplines<sup>4</sup>
- Intelligent routing, a first-of-its-kind dynamic system software, helps eliminate queues in front of analyzers by continuously calculating the most expeditious route for every patient sample

## **Total testing management**

Innovative hardware and smart informatics allow the laboratory to enable autoverification that can deliver reflex, rerun and add-on rules which can help reduce time-topatient results from hours to minutes.

## **Stable productivity**

Effective, high-volume sample management—from sources such as outpatient, outreach, network samples, patient wards and emergency departments—drives constant maximum productivity, independent of multiple tube types.



### Rapid and Consistent TAT. Comprehensive Quality Detection. Improved Efficiency.

The DxA 5000 delivers rapid and consistent TAT, provides a new level of comprehensive pre-analytical sample quality detection and reduces the number of manual processing steps to significantly improve laboratory efficiency.



#### PRE-ANALYTICAL





**Universal centrifugation protocol of four minutes 4000g**<sup>5</sup> can reduce process time with synchronized, dual centrifuges.

Aliquoter provides access to dual aliquoting system with liquid-level detection to enable smart aliquoting.<sup>6</sup>



Sample quality detection helps reduce the potential for release of erroneous results and helps accelerate time to result by quickly alerting the laboratory when a new patient sample is needed.



**Single point of entry** supports various tubes types including blood and urine and sizes for batch loading with STAT samples having the highest priority.

Throughput of up to 1,200 tubes per hour.



CONNECTED ANALYZERS <sup>7</sup>	
CHEMISTRY	IMMUNOASSAY
COAGULATION	HEMATOLOCY



**Rack-builder unit** is designed to feed high-throughput analyzers multiple tubes at one time to increase efficiency and avoid bottlenecks on the main automation line for hematology, coagulation and chemistry analyzers.



**Direct-track sampling** is designed to connect to immunoassay, serology and chemistry analyzers in addition to coagulation instruments.



#### **POST-ANALYTICAL**



#### Prestorage volume

detection helps ensure adequate sample volume for all ordered tests along with the archive information so that it can be known (along with sample stability) for subsequent retrieval/ add-on needs.

#### Storage and retrieval

facilitates fast and efficient retrieval of all specimen sizes stored in less than 90 seconds with the option for manual retrieval.





#### Scalable Design Configurations to Accommodate Growing Workloads

The DxA Family with DxA 5000 and DxA 5000 Fit represents the culmination of years of customer-inspired design and rigorous reliability testing, and strengthens Beckman Coulter's ongoing commitment to providing solutions that deliver accurate results with fast, consistent TAT, better detection of pre-analytical errors, and more efficient workflows designed to fit the needs of any-sized laboratory.





#### CONNECTIONS

#### CHEMISTRY

Deliver a low total cost of ownership supported by proven uptime, scalability and use of fewer consumables.

#### **IMMUNOASSAY**

Maximize workflow efficiency with fast throughput, best uptime and scalable solutions to meet unique laboratory requirements.

#### HEMATOLOGY

Deliver faster, more accurate results (industry-leading 93% first-pass yield<sup>8</sup>), helping to achieve clinical effectiveness and operational efficiency in the laboratory.

#### COAGULATION

Grow your test menu to meet physician needs with DxA 5000's open connectivity.

#### **CLINICAL INFORMATICS**

Empower your laboratory with intuitive tools to ensure fast results that support better patient care. Our tools help to standardize processes across instruments, optimize workflows, provide analytic insights and streamline inventory management.

#### Visit us online for configurations, instrument connections and videos

#### at www.BeckmanCoulter.com/DxA

- 1. Based on Beckman Coulter analysis of typical clinical diagnostics laboratory workflow steps. Actuals step counts may vary by laboratory.
- 2. Hammerling, J. A. (2012, February 1). Review of Medical Errors in Laboratory Diagnostics and Where We Are Today. Retrieved from https://academic.oup.com/labmed/ article/43/2/41/250500
- 3. Pre-spun status check is available for Greiner Bio-One & BD tubes.
- 4. S. Frankenberger, et al., Reducing the turnaround time of the pre-analytical phase by application of a rapid centrifugation profile. *Clin Chem Lab* Med 2017; 55, Special Suppl, pp S1 S1121, June 2017.
- 5. Protocol requires customer validation.
- 6. In development, the performance characteristics have not been established; not yet available for in vitro diagnostic use. For the latest characteristics visit the specifications tab at BeckmanCoulter.com or contact your sales representative.
- 7. Select third-party connections available. Contact your sales representative to learn more
- 8. Calculation of the number of samples per hour per square meter is based on U.S. dimensions; comparisons include two connected instruments plus one slide-maker/stainer from different manufacturers with side and rear clearance.

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