



BD FACSDuet™ Sample Preparation System integrated with the BD FACSLyric™ Flow Cytometer

Optimize your sample preparation with flexible automation that fuels consistency, maximizes lab resources and minimizes errors





Flow Forward



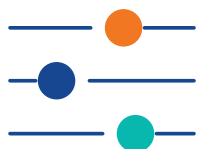
Driving efficiency

- Reduces hands-on time and optimize your lab's resources
- Automates cocktailing and sample transfer to the physically integrated flow cytometer
- The BD FACSDuet™ Premium Sample Preparation System is equipped with onboard centrifugation and washing to further drive efficiency.



Minimizing error

- Preprogrammed preparation methods
- Traceability of specimens, reagents, antibody cocktails and samples



Delivering flexibility

- Ability to create preparation methods
- Modular and upgradeable design to adapt to evolving laboratory needs
- Automated on-board cocktail preparation
- Compatibility with a wide range of reagent vial sizes and manufacturers



BD FACSDuet™ Sample Preparation System




















Drive efficiency and reduce the risk of error with a flexible sample-to-answer automated solution

Automate more. Get more done. The BD FACSDuet™ Sample Preparation System drive standardization and reduce hands-on time as part of a complete walkaway workflow solution with automatic sample transfer to a fully integrated flow cytometer.

Explore the BD FACSDuet™ Sample Preparation System in augmented reality at bdbiosciences.com/duet

Instrument comparison



Features	BD FACSDuet™ Sample Preparation System (Base)	 BD FACSDuet™ Premium Sample Preparation System
Automated sample transfer to a physically integrated BD FACSLyric™ Flow Cytometer		
Automated cocktailing with up to 45 reagents		
Accommodates up to 46 multi-vendor reagent vials		
Maximum of 40 specimen loading with 10 continuous loading specimen racks		
96-well plates for no-wash assays		
Onboard washer	-	
Onboard centrifuge (tubes)	-	 16 positions
Cytometer powered by middleware (bidirectional LIS compatibility)		
Traceability of specimens, reagents vials worklists and reagent cocktails		
BD FACSDuet™ Sample Preparation Systems help labs comply with 21 CFR Part 11		
Bulk drawer	1 tank of 1,000 mL for lysing solution	5 tanks (2 of 250 mL and 3 of 600 mL each) with ultrasonic sensor for real-time volume detection



Enhance efficiency

Reduce hands-on time and optimize your lab's resources with one easy-to-use platform that automates your workflow from sample to answer.

Increases workflow consistency and reduces the time to results

- Handles up to 3 carriers and worklists simultaneously to increase specimen throughput
- Reduces hands-on time so your team is free to focus on other laboratory testing demands
- Physically integrated with the BD FACSLyric™ Flow Cytometer for automated transfer of ready-to-acquire samples providing a true walkaway solution
- Intuitive touchscreen interface minimizes user training



The BD FACSDuet™ Premium Sample Preparation System further advances efficiency with onboard centrifugation and washing

Centrifuge

- 16 tube positions
- Automated balance tube

Washer

- Aspirator washing
- Rotor with 5 tube positions, each with vortex
- Real-time ultrasonic level-sensing in bulk tanks





Minimize error

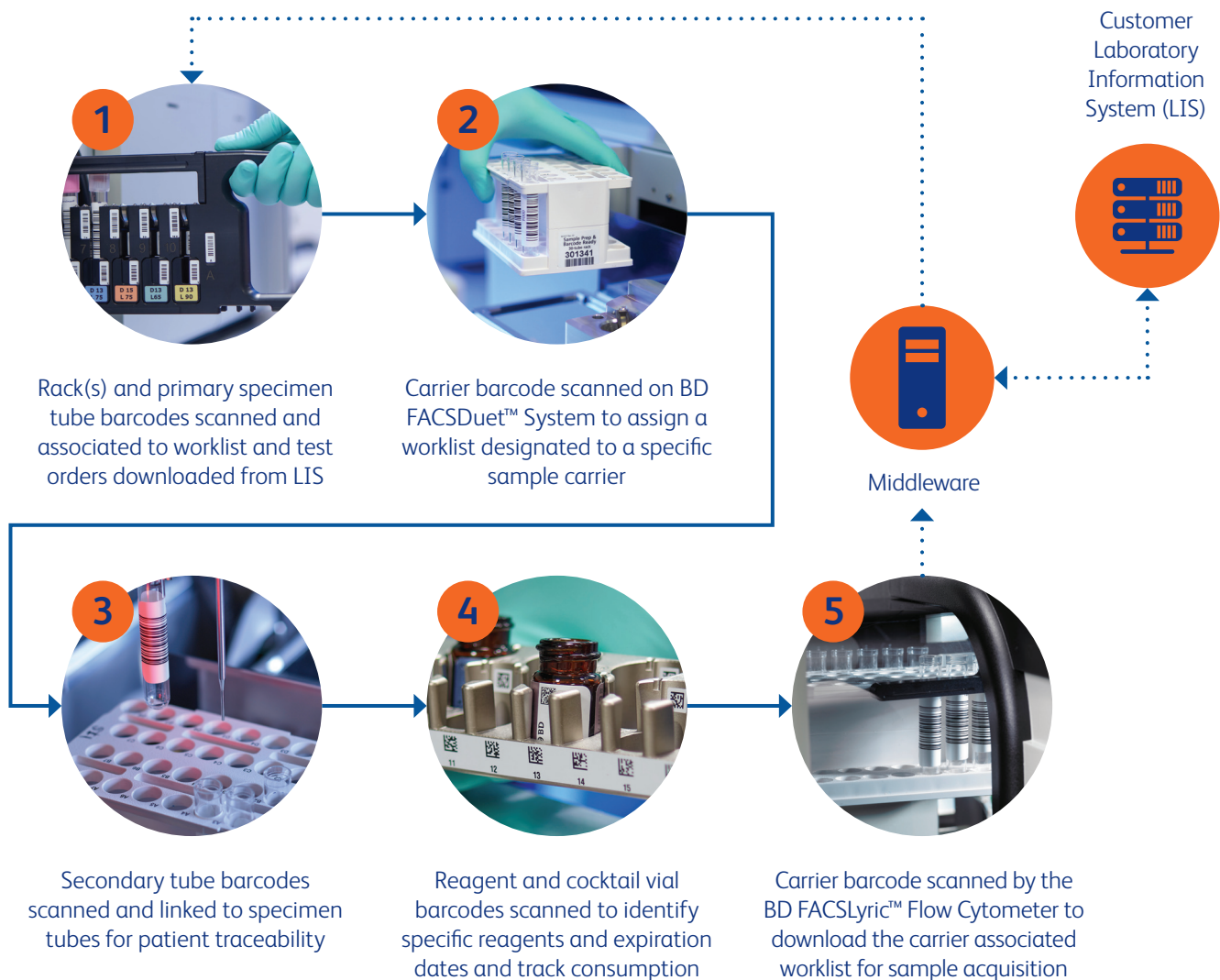
Consistently achieve reproducible results by enabling reduced user-to-user variability, full traceability with easy access digital reports, and sample preparation standardization with predefined methods.

Enables consistent workflows

- Complete traceability of specimens, samples, reagents, cocktails and worklists throughout the entire workflow
- Standardized preparation methods reduce variability and opportunities for errors
- Automated cocktailing functionality eliminates manual steps, ensuring consistent and error-free creation of multicolor antibody cocktails

Improves standardization and minimizes manual inputs

- Standardized protocols and automated specimen and reagent pipetting reduce variability in sample preparation, eliminating critical error-prone steps and leading to more consistent results
- Bidirectional communication with the laboratory information system (LIS) automates worklist preparation and eliminates the risk of errors when manually transcribing data
- Smart barcode reading enables automated worklist tracking





Leverage flexibility

Seamlessly automate sample preparation for both IVD and user-defined assays with the freedom to use a variety of specimen tubes and vials from multiple vendors.

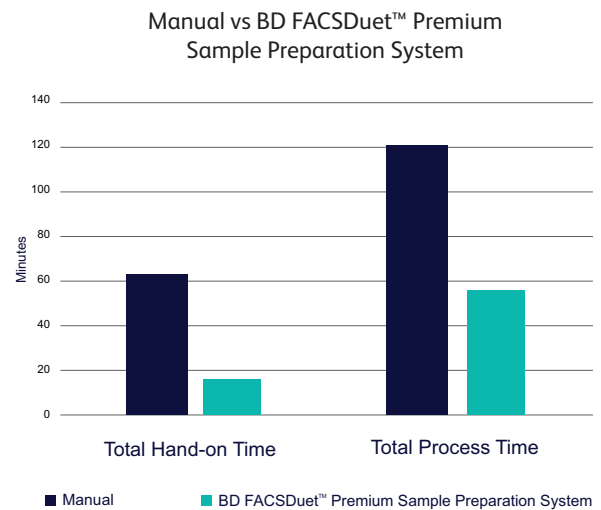
Designed to meet your lab's needs

- Allows users to create their own preparation methods
- Accommodates 20 different specimen tube types from different vendors
- Accommodates various reagent vial sizes for a total of 46 reagents on-board from a wide range of manufacturers
- Enables reagent cocktail creation with up to 45 unique reagents
- Delivers an upgradeable and modular design to adapt to the evolving needs of each laboratory

Fully automated No-Wash BD Multitest™ TBNK Assays improve efficiency on the BD FACSDuet™ Premium Sample Preparation System

Workflow efficiency outcomes

- ↓ **4X** reduction in hands-on time
- ↓ **2X** reduction in total process time

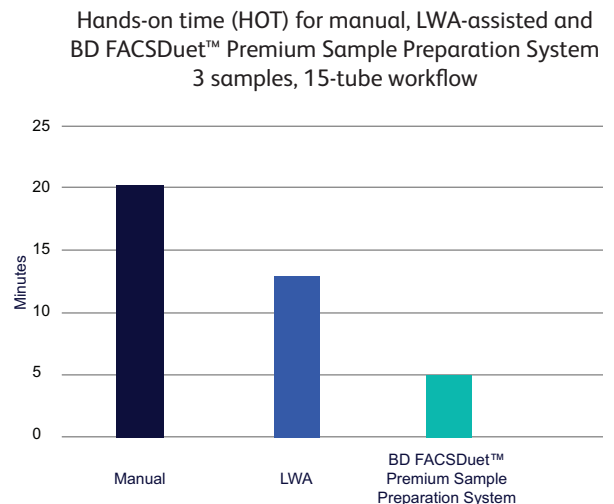


Study conducted at E.U. clinical lab. 20 specimens were prepared with the BD Multitest™ 6-Color TBNK Reagent + BD Trucount™ Tubes either on a fully automated BD FACSDuet™ System integrated with the BDFACSLyric™ Flow Cytometer or manually prepared according to the Instructions For Use.

Reduce operator hands-on-time with the BD FACSDuet™ Premium Sample Preparation System Stain/Lyse/Wash Assays

Sample processing outcomes

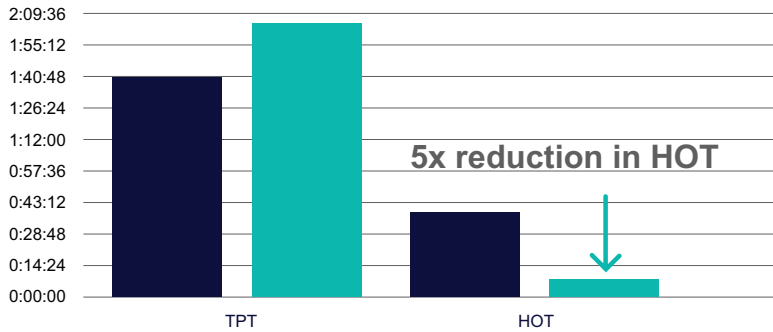
- ↓ **4.2-fold** reduction in hands on time compared to manual workflows
- ↓ **2.6-fold** reduction in hands on time compared to semi-automated workflows



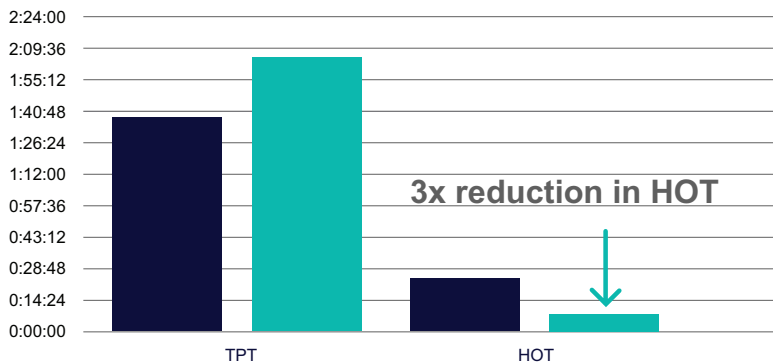
Study conducted at U.S. clinical lab. Three workflows were compared for total processing time and hands-on time for manual, LWA-assisted and the BD FACSDuet™ Premium Sample Preparation System workflows. This process uses pre-cocktailed reagents and begins with pulling reagents out of the fridge for Manual/LWA workflows or loading specimens onto the BD FACSDuet™ Premium Sample Preparation System. Three specimens were run with a SLW assay with five tubes per specimen for a total of 15 tubes per workflow.

Fully automate Prewash/Stain/Lyse/Wash workflows on the BD FACSDuet™ Premium Sample Preparation System to reduce hands-on time

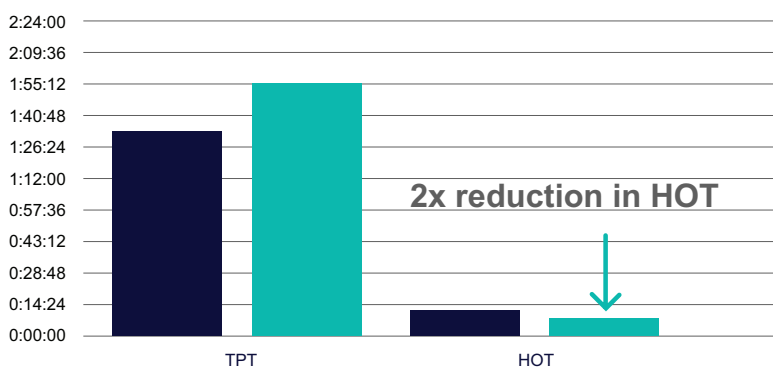
Single-reagent dispense



Pre-cocktailed reagents



Dried reagents



Legend

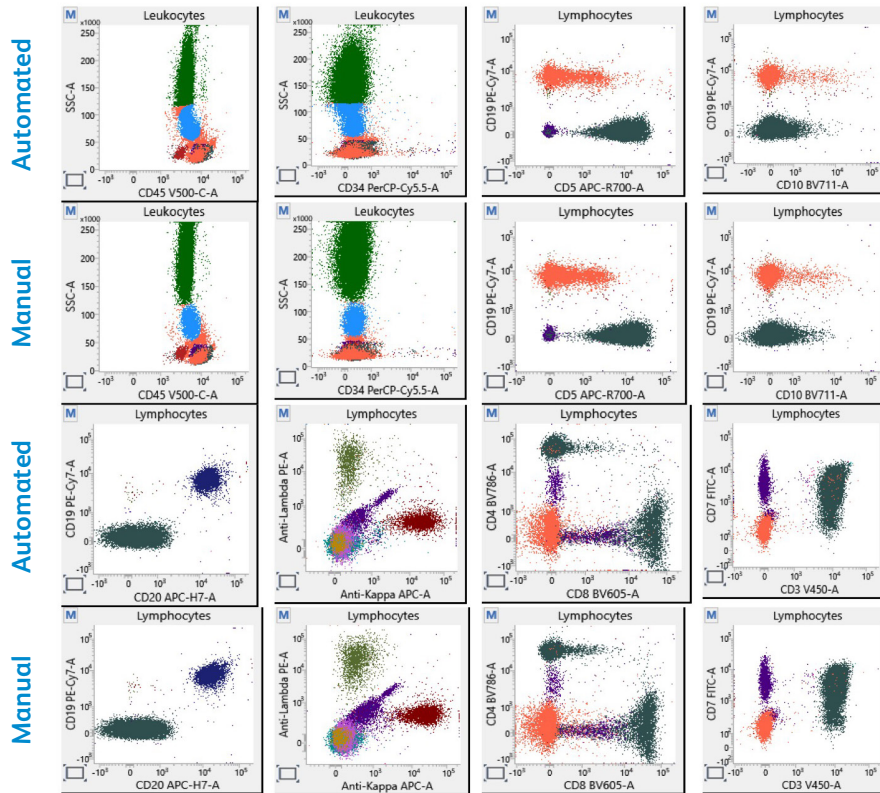
■ Manual

■ BD FACSDuet™ Premium Sample Preparation System

Study conducted at E.U. clinical lab. Three workflows were compared for total processing time and hands-on time for individually dispensed reagents, pre-cocktailed reagents and dried reagent tubes. Each assay was conducted with a specimen split into two tubes, prewashed and stained with two separate cocktails. The BD FACSDuet™ Premium Sample Preparation System method used the BD Prewash/Stain/Lyse/Wash template, modified to use either single-color reagent vials, a liquid cocktail or a BD dried reagent tube.

Samples prepared on the BD FACSDuet™ Premium Sample Preparation System show comparable data with manually prepared samples

Dot plot comparison between automated and manual methods



Flow cytometry data demonstrates the performance of the BD FACSDuet™ Premium Sample Preparation System with a fully automated Prewash/Stain/Lyse/Wash preparation method.

Study conducted at BD Biosciences. Healthy donor peripheral blood (n = 20) was either manually prepared or prepared using a fully automated preparation method on the BD FACSDuet™ System including prewash/stain/lyse/wash. This assay used BD Horizon™ Dri Chroma Reagent tubes for both manual and automated methods.

What our users have to say

“What’s the potential impact of the BD FACSDuet™ Sample Preparation System? It removes our manual processes, increases our efficiency and throughput, and gives us control in standardization of processes. It’s a controlled environment.”

Mr. David Bloxham, Principal Biomedical Scientist, Haematology-Oncology Diagnostic Service (HODS), Cambridge University Hospital NHS Trust, Cambridge, U.K.

“At last, a fully integrated end-to-end walkaway solution, which is going to make our lives significantly easier. It reduces errors...leading to increased productivity and efficiency...provides a comprehensive fully auditable account of the whole process...creates capacity to allow us to meet our key performance indicators.”

Dr. Timothy Farren, Head of Immunophenotyping (Specialist Integrated Haematological Malignancy Diagnostic Service, SIHMDS), Barts Health NHS Trust, U.K.

“I require all the monoclonal antibodies used, the ancillary reagents, tubes, the QC materials to be linked to an exact patient...this is an essential laboratory process but it’s also mandatory in order to maintain ISO15189 accreditation.”

Mr. Chris Scott, Lead Biomedical Scientist, Immunology Department, Barts Health NHS Trust, U.K.

References and Legal:

1 A study by Barts Health NHS Foundation Trust, Royal London Hospital, U.K., measured the total process time, total hands-on time and reduction in error-prone steps. Data were presented in ESCCA 2018 industrial partner event.

U.S.

The BD FACSDuet™ Sample Preparation System and BD FACSDuet™ Premium Sample Preparation System are Class 1 Laser Products. The BD FACSDuet™ Sample Preparation System and BD FACSDuet™ Premium Sample Preparation System are for In Vitro Diagnostic Use. Sample preparation for user-defined protocols and cocktail functions are for Research use Only, not for use in diagnostic or therapeutic procedures.

E.U.

The BD FACSDuet™ Sample Preparation System and BD FACSDuet™ Premium Sample Preparation System are Class 1 Laser Products.

The BD FACSDuet™ Sample Preparation System and BD FACSDuet™ Premium Sample Preparation System are in vitro diagnostic medical devices bearing a CE mark. Sample preparation for user-defined protocols and cocktail functions have not been validated for IVD use and require validation by the user.

BD Life Sciences, Milpitas, CA, USA

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