

# BD Barricor™ yields **Quality**

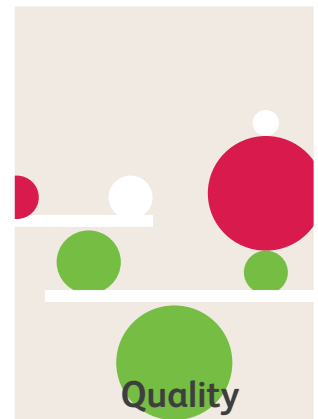
BD Barricor™ mechanical separator technology delivers a leading-edge collection and analytical process by eliminating separator artefacts that may interfere with analyte testing and which could lead to instrument downtime. This innovation helps deliver the highest diagnostic quality and patient care.

**Results Reliability:** Reducing fibrin/gel clotting events

**Sample Purity:** Reducing cell content in plasma

**Quality Control:** Enhanced control over sample quality

**Process Impact:** Sample quality directly influences processes



## BD Barricor™ as a plasma sample

Reliable & stable diagnostic processes are based on high quality samples capable to deliver clear results for clinical interpretation.

Plasma is a higher quality sample compared to serum.

Advantages of Plasma, Kathrin Schlueter

*“Good samples make good assays,  
good assays make good results”*

### Clotting process in serum samples can be inadequate

Clotting time is too short

Insufficient mixing

Patient receiving anticoagulant or thrombolytic therapy

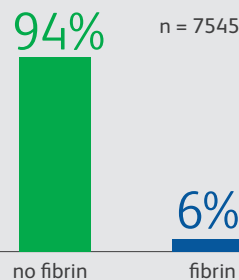
Heparin contamination

Inadequate clotting

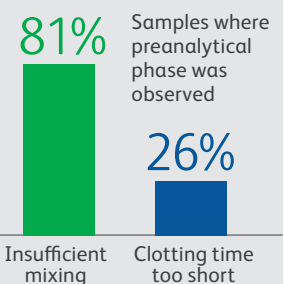
Fibrin formation during & after centrifugation

Reduced sample quality

Fibrin observed in serum samples<sup>1</sup>



Possible causes for fibrin formation<sup>1</sup>

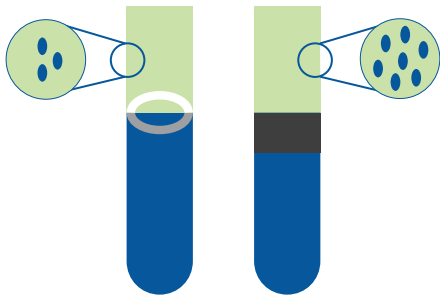


# BD Barricor™ – reduced cell counts

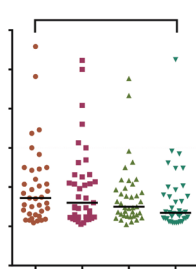
BD Barricor™ is a gel-free plasma-based blood collection tube with Lithium-Heparin. Plasma separation is achieved with our unique mechanical separator which is proven to yield a high quality sample for every analytical step.

Source: VS9195 (BD white paper)

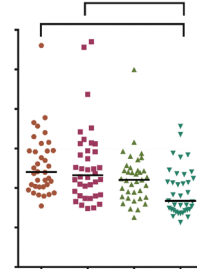
## BD Barricor™ tube      Plasma gel tube



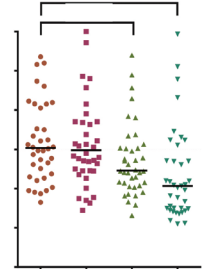
*“After centrifugation, all tubes were gently mixed by repeated inversion to ensure resuspension of all residual cells above the separator”<sup>2</sup>*



WBC count reduction of approx. 60% with respect to BD PST™ II



RBC count reduction of about 40%, with respect to BD PST™ II



PLT count reduction after prolonged centrifugation (7min. or 15min. @4000g)

# How BD Barricor™ delivers higher quality plasma

BD Barricor™ is a gel-free plasma-based blood collection tube with Lithium-Heparin. Plasma separation is achieved with our unique mechanical inner separator which is proven to yield a high quality sample for every analytical step.

## Plasma gel tube



Gel separation starts from the bottom of the tubes



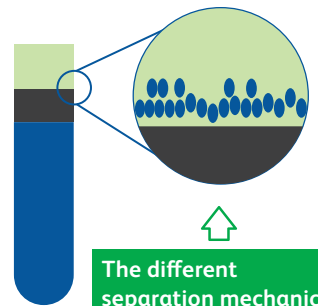
The gel flows upward through the sample gradually forming a barrier at cell-plasma interface



Along centrifugation cells migrate downward leaving the plasma phase



A thin layer of gel is formed within 2 minutes stopping the downward migration of cells



The different separation mechanics deliver two significantly different plasma samples, with BD Barricor™ delivering a cleaner sample containing fewer cells

## BD Barricor™ tube



BD Barricor™ mechanical separator starts the separation from the top of the tubes



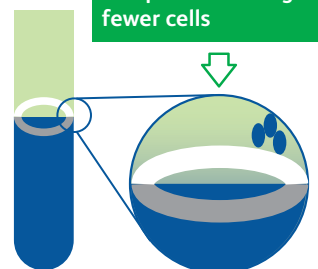
The mechanical separator is launched by the centrifugal force



The mechanical separator is stretched and leaves side space for cells to migrate



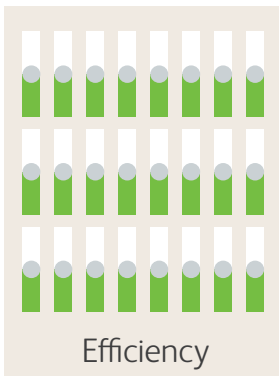
The side space remains open throughout centrifugation allowing constant downward cell migration



CENTRIFUGATION

# BD Barricor™ – sample quality impacts

“When we talk about the pre-analytical quality, one of the most important aspects to consider is that all the issues originating in this phase can influence all the subsequent phases.”




BD Barricor™ has been designed to ensure optimal performance across the sample and laboratory work-flow, providing opportunities for improving the total cost of operations.

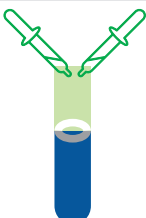


“Good samples make good assays, good assays make good results”

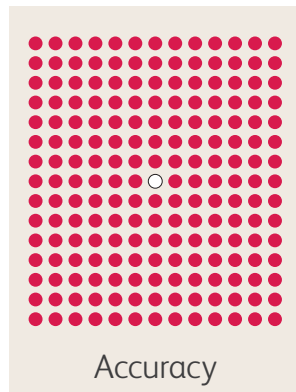


 -83.1%  
remediation time

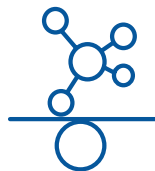
 -9.6€  
cents/tube  
remediation costs



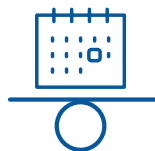
**Consolidation**  
Multiple assays can be performed on the same tube



BD Barricor™ is an innovative technology that provides greater confidence in the accuracy of laboratory results across a broad range of analytes enabling clinicians to act on reliable and credible results to deliver cutting edge care and service.



**Analyte stability**  
Serum-like performance for cell-sensitive analytes



**Therapeutic drug**  
Long term stability without aliquoting



**Inert separation**  
Enhanced precision in sensitive assays



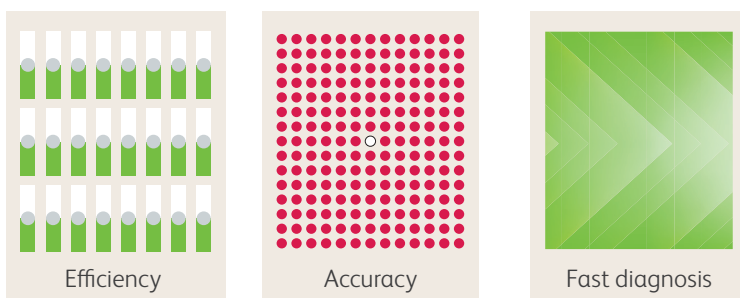
BD Barricor™ delivers a faster time-to-result for all patients with no clotting time and a reduction in centrifugation time of up to 7 minutes.



**Quality & TAT**  
No compromise between quality & speed



**Sample reliability**  
High quality sample lead to right first results



BD Barricor™ yields Quality and much more: Efficiency, Accuracy and Fast Diagnosis.

You can discover how plasma mechanical separation leverages these benefits bringing a value to your processes bigger than the sum of the individual parts.

Ask your local BD representatives for more information and references on BD Barricor™.



To learn more, check the website of the BD Barricor™ Scientific Forum:  
<http://lp.bd.com/Barricor-webinars.html>

#### Based on talks at BD Barricor™ Scientific Forum, April 2018

1. Schlueter K, Nauck M, Petersmann A, and Church S. Using BD Laboratory Consulting Services™ to understand the impact of the preanalytical phase on sample quality and safety, a multi country perspective. *Biochem Med (Zagreb)*, 2013; 23: 224
2. Padoan A., et al. Quality of plasma samples and BD Vacutainer Barricor tubes: Effects of centrifugation. *Clinica Chimica Acta* 483 (2018) 271–274.

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[bd.com](http://bd.com)

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