

TRACEABLE, EFFICIENT, & REPRODUCIBLE BLOOD FRACTIONATION

JANUS[®] G3 Blood iQ[™] Workstation

PerkinElmer understands that centralized biobanking facilities face demanding challenges to setup an efficient and scalable workflow for storage and processing of biological specimens. These challenges include: the blood fractionation process, quality control, and sample preparation for genetic analysis. The new JANUS[®] G3 Blood iQ[™] workstation offers a seamless, efficient, and traceable workflow for the genetic analysis of cfDNA, cfrRNA and genomic DNA from fractionated blood.

The JANUS[®] G3 Blood iQ[™] workstation is the premium biobanking solution for unattended automation of any complex blood fractionation workflow. To create this solution, the JANUS[®] G3 Blood iQ[™] workstation combines:

- Deep-learning imaging
- Highly reproducible liquid transfer technology
- Downstream gripper
- Deck capacity
- Out-of-the-box protocols

The JANUS[®] G3 Blood iQ[™] workstation guarantees traceable, efficient, and reproducible genetic analysis of gDNA, cfDNA and cfrRNA from buffy coat and plasma layers of fractionated blood.



Blood Layer Detection

Proprietary imaging technology allows the JANUS® G3 Blood iQ™ workstation to precisely identify plasma and buffy coat layers in centrifuged blood tubes. This imaging technology is driven by a deep-learning imaging model that precisely identifies layers and calculates volumes based on the layer height and tube geometries. This technology captures the following variables:

1. Blood vial barcodes
2. Plasma height
3. Plasma volume
4. Buffy coat height
5. Buffy coat volume

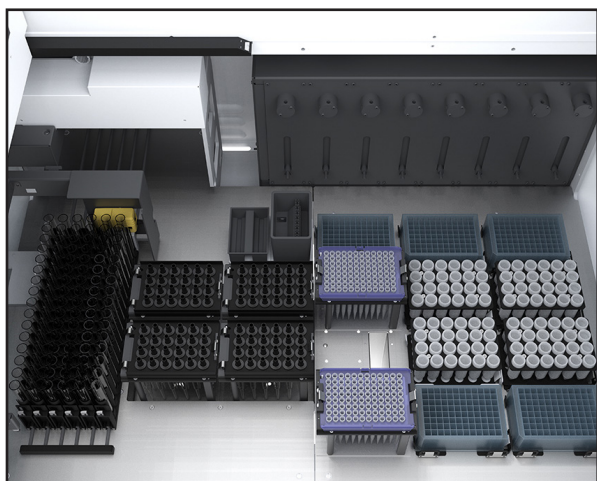
This vital information is stored in a CSV file that can be seamlessly integrated with laboratory information management systems. The JANUS® G3 Blood iQ™ workstation provides users with a notification to recover their samples if these variables do not meet the user-assigned target volume.

JANUS® G3 VariSpan™ Technology: Precision Pipetting for cfDNA & gDNA Analysis

The JANUS® G3 Blood iQ™ workstation comes with an 8-channel VariSpan™ Pipetting module which enables industry leading accuracy and precision variable pipetting.

Downstream Extraction: Integrated Gripper and Deck Capacity

The JANUS® G3 Blood iQ™ workstation is equipped with generous deck capacity and an integrated gripper to fully automate downstream workflows such as magnetic-bead based nucleic acid extraction. This instrument can further prepare wash and elution plates for nucleic acid extraction platforms such as the chemagic™ 360 instrument.



Out of the Box Protocols

PerkinElmer specializes in push-button protocols for automation of blood fractionation. At launch, the JANUS® G3 Blood iQ™ workstation will be equipped with:

- Plasma Layer Reformatting
- Buffy Coat Layer Reformatting
- Plasma and Buffy Coat Layer Reformatting

All you need to do is input your desired transfer volumes (or automated image-determined volumes) and click Go!