TERUMO BLOOD AND CELL TECHNOLOGIES

Spectra Optia® Apheresis System Granulocyte Collection

Advancing Therapeutic Apheresis and Cell Collections to the Next Level of Patient Care

Choice and Flexibility to Optimize Collections

By giving you control over collection preference, packing factor and collect pump flow rate, the Spectra Optia system gives you the flexibility you need to optimize each granulocyte (PMN) collection procedure.

Procedure and System Highlights

Procedural flexibility	Versatile software is designed for a wide range of device interaction preferences and operator skill levels
Consistent results	Automated Interface Management (AIM) system is designed to produce consistent results through interface stability
Reliable performance	Controls the depth of the collection into the red blood cell layer using the AIM system
Collection efficiency *Mean values ± standard deviation**	PMN CE1 = 53.7 ± 6.91, N = 32 Maintains efficiency across the range of inlet pump flow rates by automatically adjusting collect pump flow rate
Low platelet loss *Mean values ± standard deviation**	Platelet CE1 = 10.9 ± 1.45, N = 32
High viability	Preserves PMN viability throughout the collection process
Collect specific product volume	Allows you to choose the collected product volume to ensure the maximum volume is not exceeded
Intuitive hydroxyethyl starch (HES) option	Establishes the appropriate packing factor automatically, based on the use of starch
Procedural automation	Allows you to spend more time with patients
Intuitive graphical user interface	Streamlines your procedure management with touch-screen instructions and simple data entry
Automatic recovery	Maintains your targeted collection preference during flow rate interruptions Recovers from power failures at the point where the power failed

*Refer to the PMN Study Data Sheet

How It Works

The performance you expect

The AIM system provides continuous interface monitoring, interpretation and adjustment for efficient PMN collection.

- Monitors the collect port and interface position up to 25 times per second with a resolution of approximately 10 microns
- Interprets interface information using a patented optical detection system
- Adjusts the pumps and valves to manage the interface position and efficiently remove the targeted components

Continuous Processing

Whole blood enters the channel

The packing factor and channel design allow for the separation of white blood cells (WBCs) (with or without the use of HES).

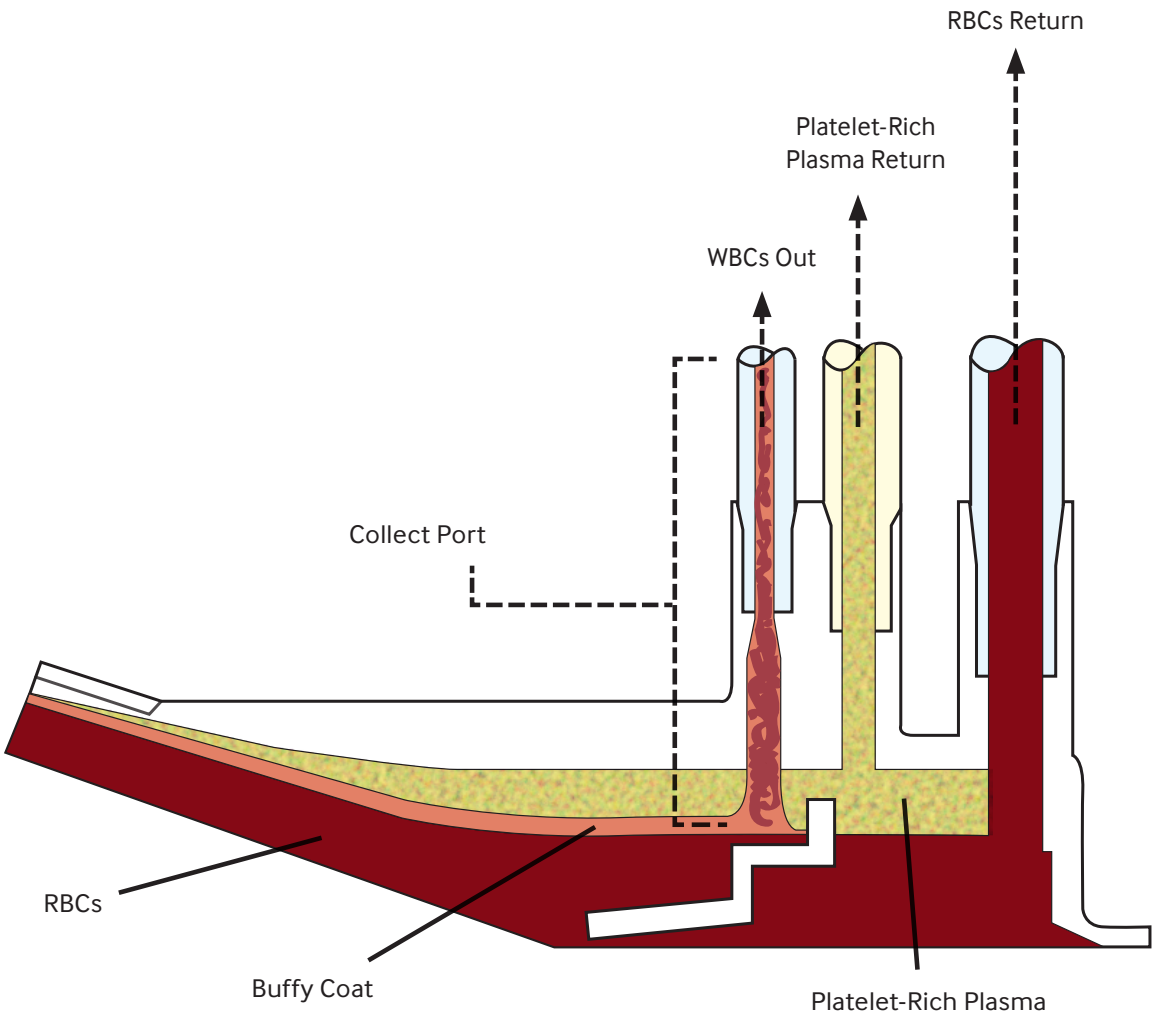
Interface established

- AIM system quickly establishes the interface at the collect port
- Buffy Coat accumulates
- AIM system controls the concentration of cells by adjusting the plasma pump flow rate

Red blood cells (RBCs) and plasma pumped back to the patient

Targeted cells continuously pumped into the collection bag

- You may monitor and adjust the depth at which the cells are collected within the Buffy Coat layer based on the desired hematocrit of the collected product



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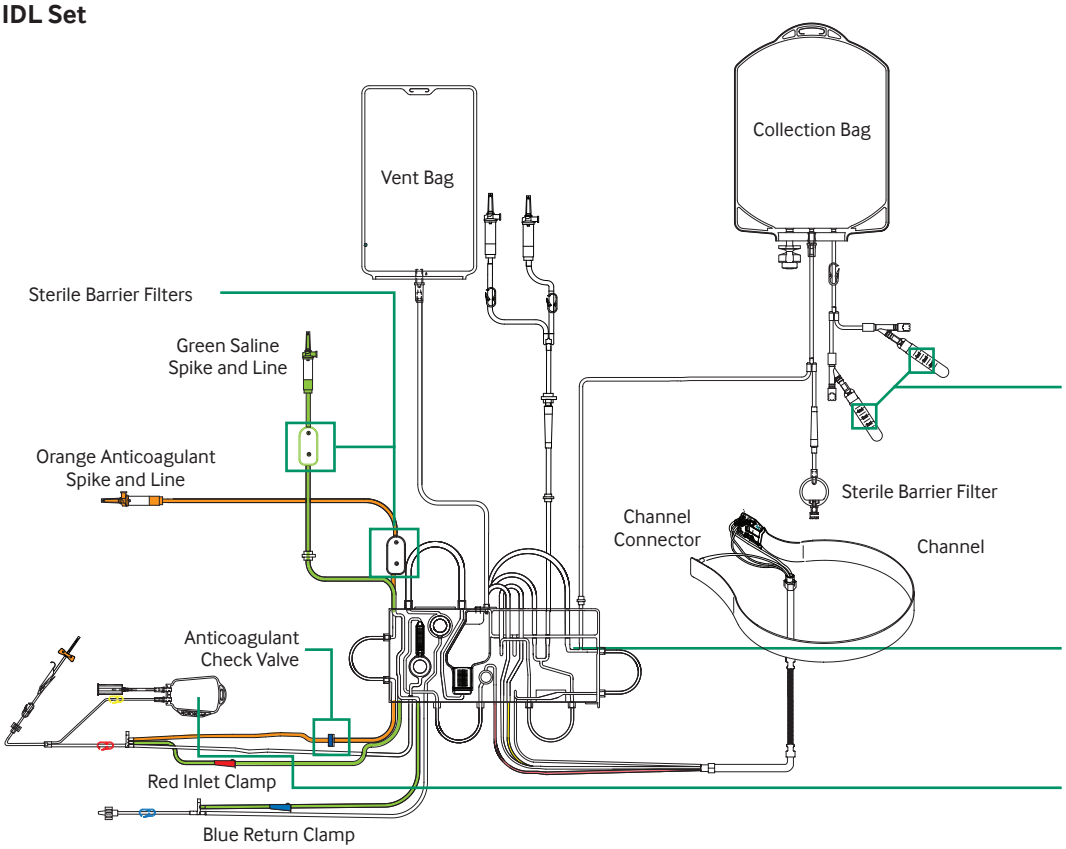

Incorporated Sample Bulbs
Allow you to sample the collected product while maintaining a functionally closed set

Cassette
Snap-in-place design allows you to quickly load the cassette

Pre-Attached Diversion Bag
Diverts the "skin plug" from venipuncture, potentially reducing the chance of contamination in your final stored product

ECV	253 mL under normal conditions and 297 mL maximum with a full reservoir
Functionally closed	Reduces the risk of microbial contamination in the collected product
Compact packaging	Minimizes the space required for storage
Color-coded components	Simplifies setup and operation

Working With You

Each and every interaction we have with you is important. By fostering open and ongoing relationships, we bring more value to you and the patients we're all focused on serving.

Even after the technology is in place, we continue to serve you with:

- Education and training
- Technical support
- Clinical and scientific support
- Customer support
- Users groups and professional networks

TERUMO BLOOD AND CELL TECHNOLOGIES

Terumo Blood and Cell Technologies is a medical device company. Our products, software and services enable customers to collect and prepare blood and cells to help treat challenging diseases and conditions. Our employees around the world believe in the potential of blood and cells to do even more for patients than they do today. **TERUMOBCT.COM**

Terumo BCT, Inc.
Lakewood, CO, USA
+1.303.231.4357

Terumo BCT Europe N.V.
Zaventem, Belgium
+32.2.715.0590

Terumo BCT Asia Pte. Ltd.
Singapore
+65.6715.3778

Terumo BCT Latin America S.A.
Buenos Aires, Argentina
+54.11.5530.5200

Terumo BCT Japan, Inc.
Tokyo, Japan
+81.3.6743.7890

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