Hemosep

Revolutionary Cell Salvage

Concentrating **all blood components** from salvaged autologous blood.

What is Hemosep®?

Hemosep® is different to traditional cell salvage because all blood components are saved, not just red blood cells (RBC).

Hemosep® is simple and reproducible way to provide patients with a haemoconcentrated mix of all cell components, including platelets and clotting factors[1,2,3,4], which are lost in traditional cell salvage techniques.

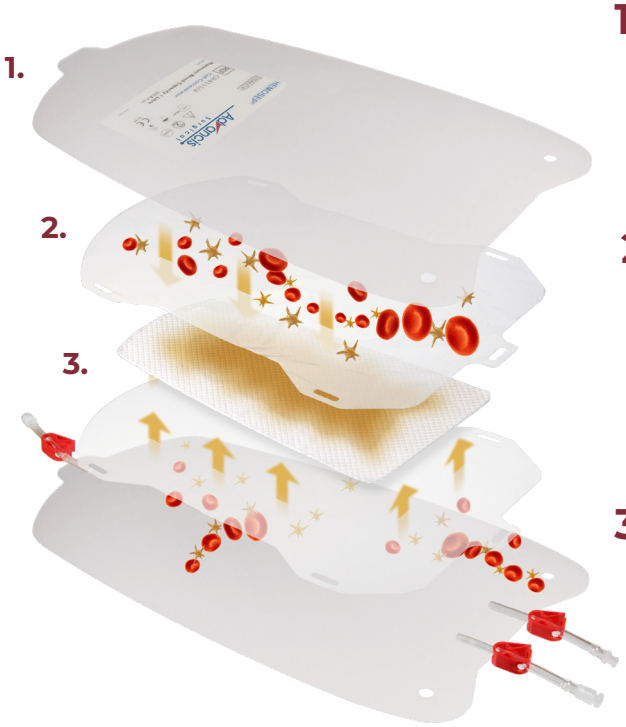
Why use Hemosep®:

- Reduced need for donor blood products[1]
- Reduced post-operative bleeding[1]
- Reduced patient recovery time[2]
- Reduced time in ICU[2]

How does Hemosep® work?

Hemosep® processes the patient's salvaged blood collected during medium to high blood loss procedures including cardiac, orthopaedic, spinal, renal, vascular and obstetric surgeries. It uses modified separation technique, concentrating the blood through a membrane controlled superabsorber.

The **Hemosep® Cell Concentrator Bag** is the active processer of the device and consists of three parts:



1. The blood bag

Houses the technology (filter membrane and super absorbent pad) and blood whilst it is filtered

2. Filter membrane

A unique size pore structure to control what is able to pass through during filtration means that no cellular components can pass into the super absorbent pad

3. Superabsorbent pad

The excess plasma and blood detriments that pass through the filter membrane are absorbed and turned into a gel-like substance. This allows for easy biohazard disposal.

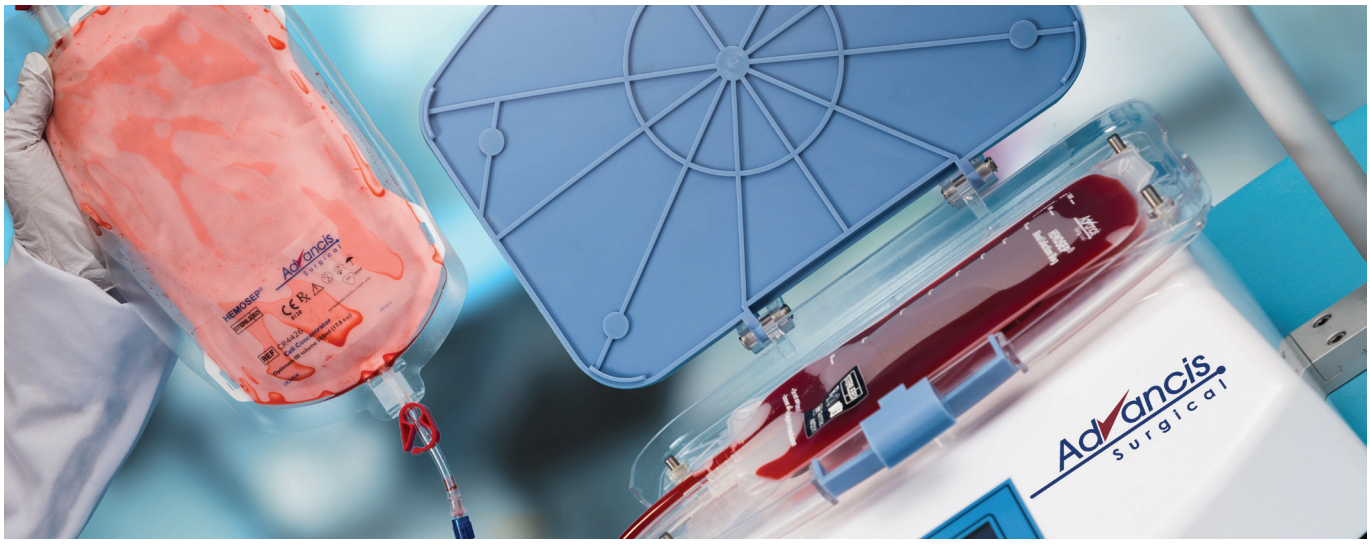
Cardiac Applications:

Hemosep® can be used to collect and process both residual surgical site blood and blood from the heart-lung machine post bypass. To collect the blood left in the heart-lung machine, the **Hemosep® Cell Concentrator Bag** can simply be connected to the tubing below the reservoir for gravity fill.

Intra-operative Applications:

With the inclusion of the intra-operative suction tool and blood reservoir, **Hemosep®** can be used during any blood loss procedure. Using the suction tool, blood is aspirated directly from the surgical site into the intra-operative blood reservoir. Here, health care professionals have the flexibility to process the blood for return to the patient or discard.

Clinical Benefits



- Retains all cell components including red blood cells, platelets and clotting factors[1,2,3,4]
- Reduces the need for post-operative allogenic transfusion[1]
- More effective at platelet and protein preservation than traditional cell salvage[3]
- Fibrinogen is concentrated; important in a cardio-pulmonary bypass setting[2,4]
- Reinfusing all cell species can reduce post-operative bleeding[1]
- Filters out broken cells, plasma, saline, blood detriments and surgical debris[3,4]

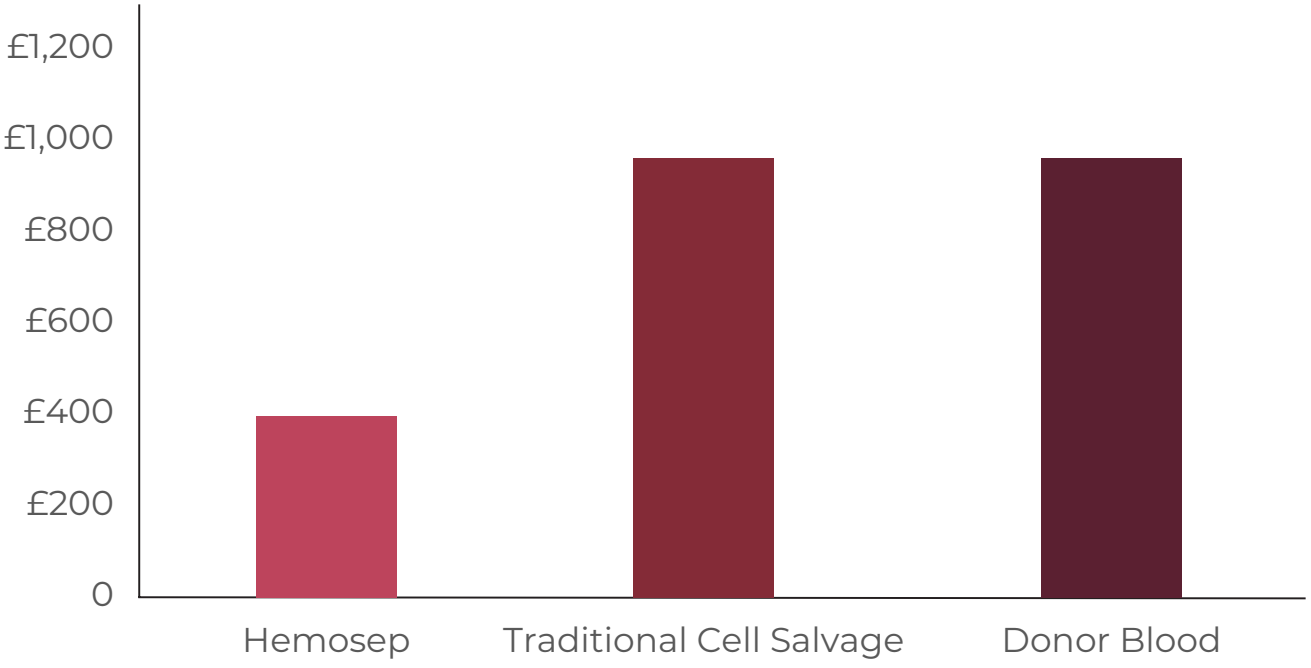
Patient Benefits

- Reduced need for donor blood products[1]; reduced adverse transfusion reactions
- Faster patient recovery times: could reduce ICU time by up to a day per patient[2]
- Offers an option for patients when making decisions on receiving blood products for cultural or religious reasons

Cost Benefits

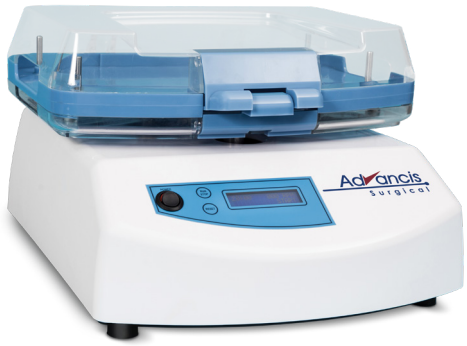
- Provides cost savings versus traditional cell salvage and donor blood (see fig. 1)
- Functions as designed without technical failures[1]
- Gelatinous waste product easier to dispose of than large volumes of fluid associated with traditional cell salvage

Figure 1: *Typical cost of usage of Hemosep, traditional cell salvage and donor blood**



*Based on the average cost of the associated factors relevant to each method of transfusion. Based on average UK costs (cost savings may vary depending on market).

Hemosep Product List



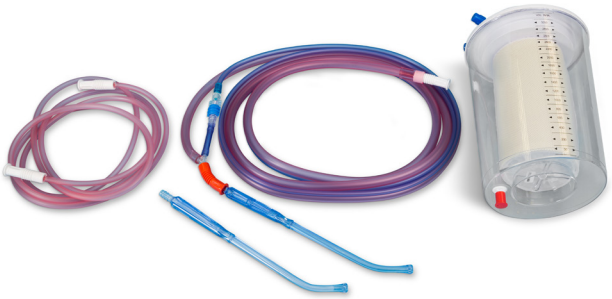
Shaker Unit Code: **CR4213**

Unit of Measure: **1** Box Quantity: **1**

Cell Concentrator Pack Code: **CR4426**

Including: Blood collection bag & blood processing bag

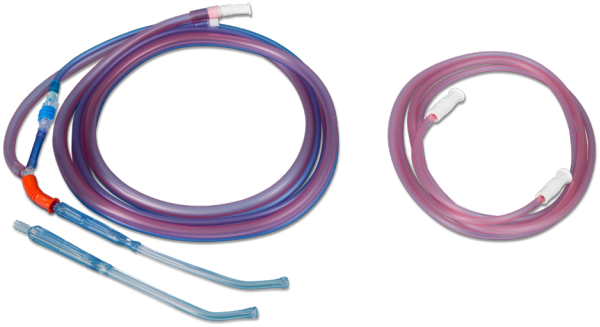
Unit of Measure: **1** Box Quantity: **1**



Intra-Operative Kit Code: **CR4428**

Including: Blood Reservoir, Wand Set & Tubing

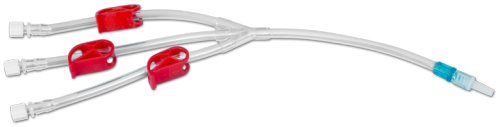
Unit of Measure: **1** Box Quantity: **1**



Suction Kit Code: **CR4434**

Including: Spare Wand Set and Tubing

Unit of Measure: **1** Box Quantity: **1**



One to Three Connector Code: **CR4432**

Unit of Measure: **1** Box Quantity: **8**

Intra-Operative Stand Code: **CR4429**

Unit of Measure: **1** Box Quantity: **1**

References:

1. Gunaydin S, Gourlay T.(2013) **Novel Ultrafiltration Technique for Blood Conservation in Cardiac Operations :** Ann Thoracic Surg ;95:2148-51
2. Mushtaq R, Jeganath V, Levine AJ .**Evaluation of Hemosep® Cell Salvage Device inn Cardiac Surgical Patients** –Poster Presentation
3. Data on File (NHS BLOOD Testing)
4. Gunaydin S, Robertson C, Baran-Budak A, Gourlay T (2017) **Comparative evaluation of blood salvage techniques in patients undergoing cariac surgery with cardiopulmonary bypass:** Perfusion 33(2) 105-109

MADE IN THE UK

Advancis Surgical is a trading name of Brightwake Ltd.
Lowmoor Business Park, Kirkby-in-Ashfield,
Nottingham, NG17 7JZ, England

Tel: +44 (0)1623 751500
Fax: +44 (0)871 264 8238
Email: info@advancissurgical.com

Advancis Surgical

www.advancissurgical.com

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