

*To make your
workflow excellent.*



Implementation of The S-Monovette® Blood Collection System





As your partner in Pre-Analytics, we will enable you to reduce the number of re-bleeds by lowering your haemolysis rate.

The introduction of S-Monovette® will also reduce your operating costs and help to decrease NHSGGC's Carbon Footprint.

The S-Monovette®

Designed with safety in mind



Unique design allows blood to be collected using the aspiration or vacuum technique

The screw cap makes the S-Monovette® easy to open, thereby minimising the aerosol effect.

The **deeper membrane** prevents contact with blood at the puncture site.

Special needle guard minimises the risk of needlestick injuries.

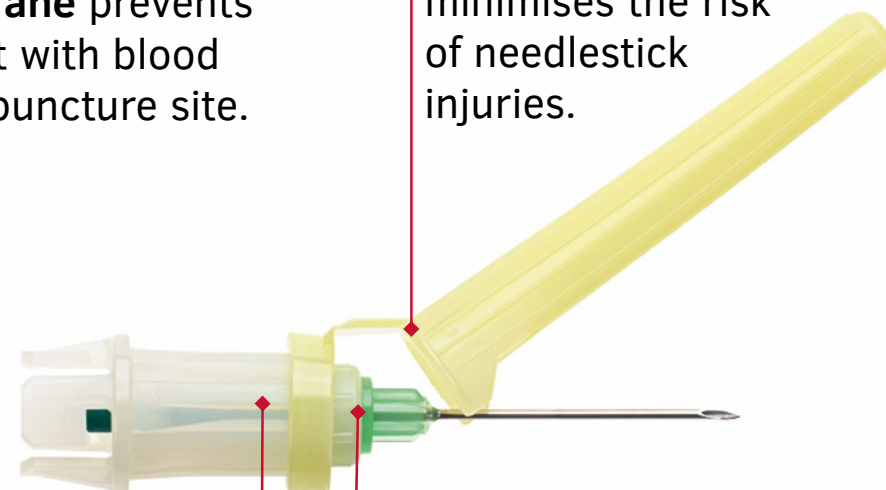


Transparent label allows for easy **visual inspection**.

Holding tabs guarantee a reliable connection and lock between the needle and the S-Monovette®.

Slim needle holder enables a flat puncture angle, reducing punctures through the vein.

Ready for immediate use thanks to the **integrated needle holder**.



The S-Monovette®

Design and function



The aspiration technique

For optimum sample quality



- During the blood collection procedure, the plunger rod is gently retracted.
- The blood flow can be adapted to the patient's vein conditions, thereby preventing vein collapse.
- The controlled and constant blood flow reduces shear stress and minimises haemolysis.

The vacuum technique

A fresh vacuum at all times



- The piston rod is pulled back, engaged and broken off before the blood sample is taken.
- This creates a fresh vacuum in the S-Monovette® before the blood sample is taken.
- As with the aspiration technique, the filling volume is always precise.



Two in one and one for all – the right blood collection system for every situation.

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Waiting Times

Repeated Samples

Patient Safety

Bed Pressures

Delayed Diagnosis

Reduced Spend

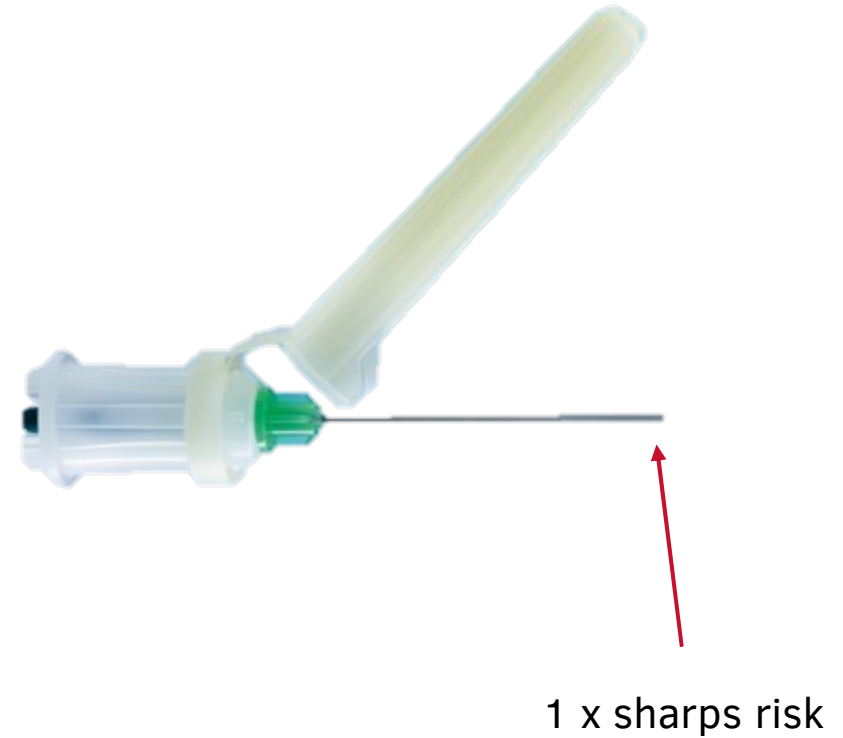
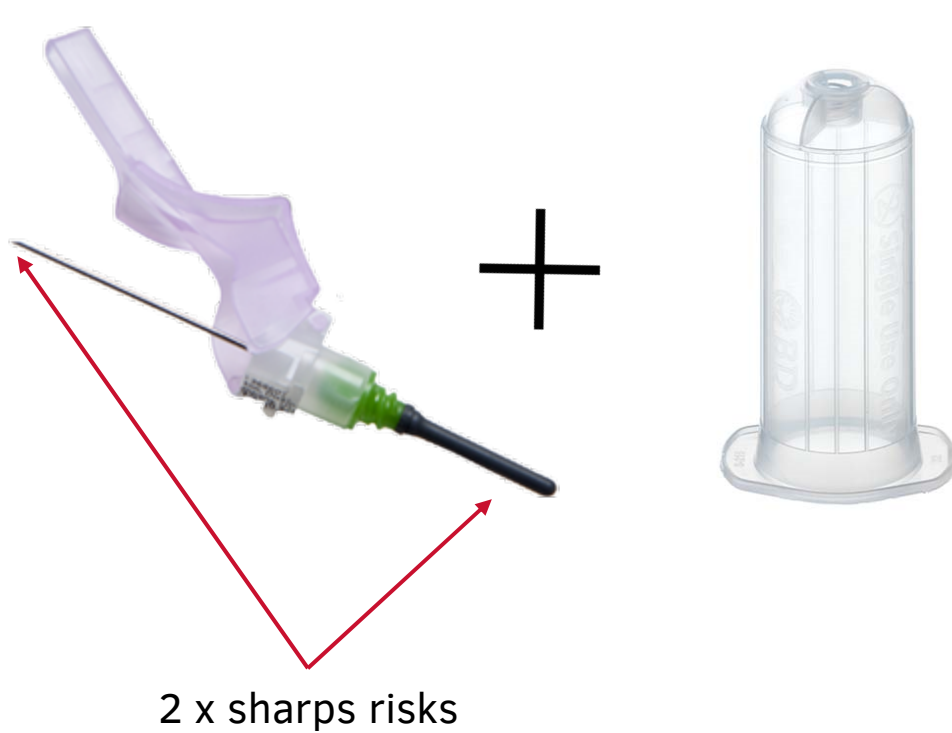
Haemolysis – What the Studies Say



	Vakuumsystem	Aspirations- technik	Differenz
Cantonal Spital Fribourg / Schweiz			
Millius et al. Pract Lab Med 2021; 27:e00252 The „EPIQ“-Study (Evaluation of preanalytical quality): S-Monovette® in manual aspiration mode drastically reduces hemolytic samples in head-to-head study	17,0 %	4,3 %	12,7 %
Sengkang General Hospital, Singapore			
Omar et al. Pract Lab Med 2023; 35 e00315 Reducing blood sample hemolysis in the emergency department using S-Monovette® in aspiration mode	38,2 %	9,4 %	28,8 %
Wright Patterson AFB Military Hospital / USA			
Pilla et al. Poster AACC 2018 Reducing Hemolysis with the Sarstedt S-Monovette® Blood Collection System	13,0 %	1,9 %	11,1 %
Klinik für Forschung Istanbul / Türkei			
Kazozoglu et al. Clin Lab 2019; 65(1) The Effect of Different Blood Drawing Methods on Hemolysis and Test Results from Intravenous Catheters Used in Emergency Departments	14,7 %	4,4 %	10,3 %
Klinisches Labor Málaga / Spanien			
Merida et al. Poster AACC 2012 Influence of a combined collection method on hemolysis	17,5 %	6,9 %	10,6 %
Universitätsklinik Parma / Italien			
Lippi et al. Clin Biochem. 2013; 46(7-8):561-564 Prevention of hemolysis in blood samples collected from intravenous catheters	29,0 %	2,0 %	27,0 %
Use of the S-Monovette® with the aspiration technique significantly reduced the haemolysis rate in all the studies mentioned above			

All showing a reduction of more than 10%

Pre-assembled needles vs assembling current needles



1,947 Needle Stick Injuries have cost the NHS £10.8 between 2012-2022*



40%

CO₂e reduction*

93%

less rubber with the
S-Monovette® cap*

32%

less material use*

33%

lower emissions
by using PP instead
of PET

* Compared to vacuum systems

The Cost-Effective & Sustainable benefits of our needles...



Using needles which are smaller:

- The needles have been designed to enable a flat angle of entry into the vein - reducing bruising to patients
- Having smaller needle systems means you can fit 80% more needles into a sharps bin
- Meaning you can buy less bins

The needles weigh less too

- As waste disposal is charged by weight, disposing of less bins and lower sharps mass means - disposal will be cheaper



The Benefits of our Packaging














- User friendly cardboard packaging for environmentally friendly disposal
- Saves storage space with the compact packaging of 50 units
- The flat-folding cardboard box used for the S-Monovette® significantly reduces the waste volume
- No polystyrene is used in our packaging

**5x more waste volume
for vacuum system packaging**





Vacuette	
Tube Colour	Vacuette
Lavender	EDTA (5ml)
Lavender	EDTA (6ml)
Lavender	EDTA (9ml)
Lavender	K2EDTA (4ml)
Grey	Flu/Oxalate (2ml)
Green	Lithium Heparin (4ml)
Green	Lithium Heparin (6ml)
Green	Lithium-Heparin Separation Gel (2.5ml)
Red	Serum (6ml)
Gold/Brown	Serum Separation Gel (5ml)
Blue	Sodium Citrate (3.5ml)

SARSTEDT Blood Collection Tubes			
Tube Colour	S-Monovette	Article Number	Preparation
 Violet	S-Monovette® 4.9ml K3E	04.1931.100	EDTA
 Violet	S-Monovette® 7.5ml K3E	01.1605.100	EDTA
 Violet	S-Monovette® 9ml K3E	02.1066.100	EDTA
 Violet	S-Monovette® 4ml K3E	04.1921.100	EDTA
 Grey	S-Monovette® 2.6ml FE	04.1903.100	Fluoride/ EDTA
 Green	S-Monovette® 4ml LH	04.1920.100	Lithium Heparin
 Green	S-Monovette® 4.9ml LH	04.1936.100	Lithium Heparin
 Green	S-Monovette® 2.7ml LH-Gel	04.1928.100	Lithium Heparin Gel
 Red	S-Monovette® 4.9ml Z	04.1934.100	Serum
 Brown	S-Monovette® 4.9ml Z-Gel	04.1935.001	Serum Gel
 Blue	S-Monovette® 3ml 9NC	04.1919.100	Citrate

Summary



SARSTEDT are committed to providing a solution which enables all patients access to an accurate diagnosis first time, every time.

We will achieve this with NHSGGC by:

- Lowering haemolysed rejected sample rates.
- Ensuring lowered haemolysed sample rate is maintained
- Reduce operating costs & help NHSGGC to identify cost savings
- Lowering carbon output of blood sample collection
- Supporting NHSGGC to communicate the sustainability benefits

We will achieve the above through a robust implementation plan that will deliver the improved performance you want in a timely manner.

