Go for Gold!

The S-Monovette® – the gold standard in blood collection

Pre Analytical Workflow

SARSTEDT

Set standards in blood collection

The S-Monovette®

The gold standard in blood collection

Venous blood is the most important sample material for medical analysis. And the basis for performing diagnostics smoothly and precisely is optimal specimen quality. The S-Monovette® from SARSTEDT has set standards in this field since its launch:

No other blood collection system provides such optimal specimen quality, regardless of the vein conditions – reliable blood collection for a reliable diagnosis.

Saves time

- Every specimen delivers a result: Minimize the rate of repeated blood collection
- Always the right blood collection system: Avoid collapsed veins in patients with difficult vein conditions

Save time when it matters.

Safe

- The pre-assembled needle, secure connection and proven needle guard provide reliable protection from needlestick injuries
- No contact with the sample material: Hygienic sample collection using a closed blood collection system
- Reliable test results for a reliable diagnosis

Protection where it is needed.

SARSTEDT

First-rate patient care

- Minimize patient discomfort: Reduce repeated punctures and blood collection by avoiding collapsed veins.
- In all circumstances: In addition to the standard version, we offer a wide range of specialty options for young and old or critically ill patients
- For the best possible diagnosis: The optimal specimen quality minimizes errors during analysis

The well-being of your patients is non-negotiable for us.

Everything from a single source

- Sample collection: User-oriented solutions – not only for venous blood collection
- Sample transport: Rapid sample transport between departments in the hospital and further afield
- Sample handling: Modular, fast and reliable solutions for laboratory automation

Achieve more together.
Let's work together!

Sustainable

- Reduces greenhouse gases: 40% less CO_2e compared to conventional blood collection systems
- Less material used: 32% less material used compared to vacuum systems
- Less waste: 80% less waste as a result of economical and environmentally friendly packaging as well as the compact product design

An investment in a better future.

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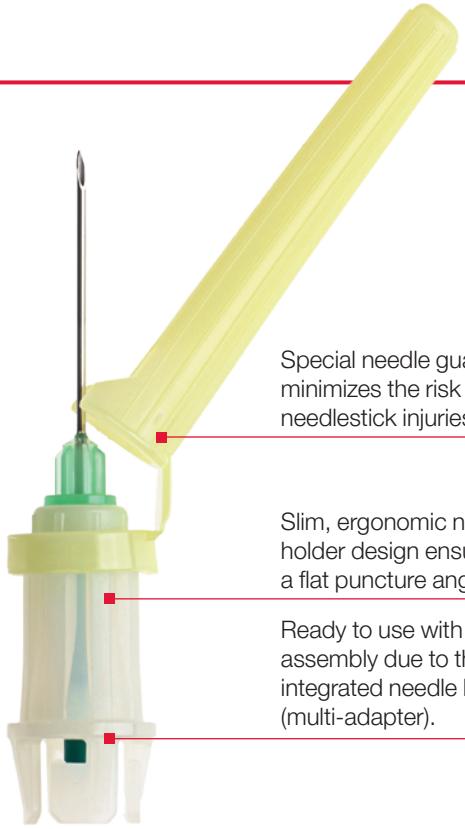
Design and function of the S-Monovette®

The flexible blood collection system



Special needle guard minimizes the risk of needlestick injuries.

Slim, ergonomic needle holder design ensures a flat puncture angle.

Ready to use with no assembly due to the integrated needle holder (multi-adapter).

Comfortable single-handed control of the Safety-Multifly® Needle guard.

Ready to use with no assembly due to the integrated needle holder (multi-adapter).

Long or short tubing options available.

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

Recessed membrane prevents contact with blood at the puncture site.

Screw cap for easy opening of the S-Monovette®, minimizing the aerosol effect.

Unique design permits blood collection with the aspiration or vacuum technique.

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Two in one and one for all

The right blood collection system in every situation

The aspiration technique – the most gentle collection method

With the aspiration technique, blood flow can be adjusted to the patient's vein conditions and a collapsed vein can be avoided. During blood collection, the piston is gently withdrawn. The controlled and constant blood flow reduces shear stress and minimizes hemolysis.

Gentle aspiration technique for optimal specimen quality.

The aspiration technique – find out more now!

sarstedt.com/
s-monovette-us-vid-asp

The vacuum technique – always a fresh vacuum

To use the vacuum technique with the S-Monovette®, the piston is pulled back and engaged before blood collection. This ensures that a fresh vacuum is always created in the S-Monovette® and achieves a precise filling volume as with the aspiration technique.

The vacuum technique – find out more now!

sarstedt.com/
s-monovette-us-vid-vac

Aspiration technique

Vacuum technique

2 in 1

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Saves time

Optimal specimen quality and fast results

Centrifuged blood sample with a clear supernatant (serum) shows optimal specimen quality for problem-free diagnostics.

Why you should ensure the best possible specimen quality

- Time, personnel and material costs are reduced with a minimized hemolysis rate.
- Poorquality samples make problem-free diagnostics more difficult.
- Repeated blood collection is stressful for both patients and staff and results in increased costs.

For problem-free diagnostics and optimal patient care, a blood sample must meet the highest requirements. Hemolysis can falsify laboratory results and make repeated blood collection necessary.
The aspiration technique of the S-Monovette® can significantly reduce the occurrence of hemolytic samples as the blood flow can be adjusted to each patient's vein conditions.

Due to the gentle blood collection using the aspiration technique and the low stress this involves, vein collapse is largely prevented even with fragile vein conditions.

Optimal specimen quality also means correctly filled samples with no coagulation. Coagulation as well as underfilled coagulation analysis samples delay testing and may necessitate repeated blood collection.

Hemolysis – what the studies say

- High shear stress during blood collection leads to increased hemolysis.
- Strongly hemolytic blood samples cannot be analyzed and require repeated blood collection.
- The gentle aspiration technique of the S-Monovette® can reduce hemolysis rates considerably compared to the vacuum technique.

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	Vacuum system	Aspiration technique	Difference
Cantonal Spital Fribourg / Switzerland 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%**
Clinic for Research Istanbul / Turkey Kazezoglu et al. Clin Lab 2019; 65(1)	14.7%	4.4%	**10.3%**
The Effect of Different Blood Drawing Methods on Hemolysis and Test Results from Intravenous Catheters Used in Emergency Departments	18.9%	0.0%	**18.9%**
Clinical Laboratory of Málaga / Spain Merida et al. Poster AACC 2012 Influence of a combined collection method on hemolysis	17.5%	6.9%	**10.6%**
University Hospital of Parma / Italy 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%**

Using the S-Monovette® with the aspiration technique, the hemolysis rate could be significantly reduced in all these studies.

Now save even more time by combining the S-Monovette® with the sample transport system Tempus600® – benefit from optimal blood collection and quick sample transport.

Use synergies now and save time.

sarstedt.com/
s-monovette-us-gaintime

SARSTEDT

Safe

Where it matters

Work safely!

sarstedt.com/
s-monovette-us-safety

The Safety Needle and Safety-Multifly® Needle – both with integrated needle holder and needle guard.

Safety for the user

The S-Monovette® not only sets standards in patient care; user safety is also a top priority for us: Eliminating the step of assembling the needle and holder means the highest requirements for hygiene, work safety and efficiency are met.

Together with the Safety Needle or Safety-Multifly® Needle, the S-Monovette® forms a closed blood collection system that can remain closed in all vein conditions.

Safe means safe: the Safety Needle / Safety-Multifly® Needle

- The lock and key principle forms a reliable connection between the S-Monovette® and the Safety Needle / Safety-Multifly® Needle.
- The safe and hygienic needle concept does not require assembly and is ready to use immediately.
- Safe puncture with the Safety Needle / Safety-Multifly® Needle as a result of the flat puncturing angle.
- Hygienic sample collection due to the closed system and recessed membrane.
- The needle with integrated holder and proven needle guard provides reliable protection from needlestick injuries.

Safety for the patient

The slim, ergonomic needle holder enables a particularly flat puncturing angle and prevents piercing through the vein. This ensures the best possible patient care.

SARSTEDT

First-rate patient care

Focus on people

Whether young or old – our focus is on people

SARSTEDT offers the Pediatric S-Monovette® for the smallest patients. It can be used to collect small volumes of approximately 1 ml straight from the vein without a transfer step.

The elderly as well as critically and chronically ill patients also have fragile veins that are very easily damaged.

The S-Monovette® with gentle aspiration technique is the solution.

- Minimum stress for the patient
- No need for additional syringes
- No need to transfer samples into secondary tubes
- Avoids repeated punctures and blood collection
- No collapsed veins

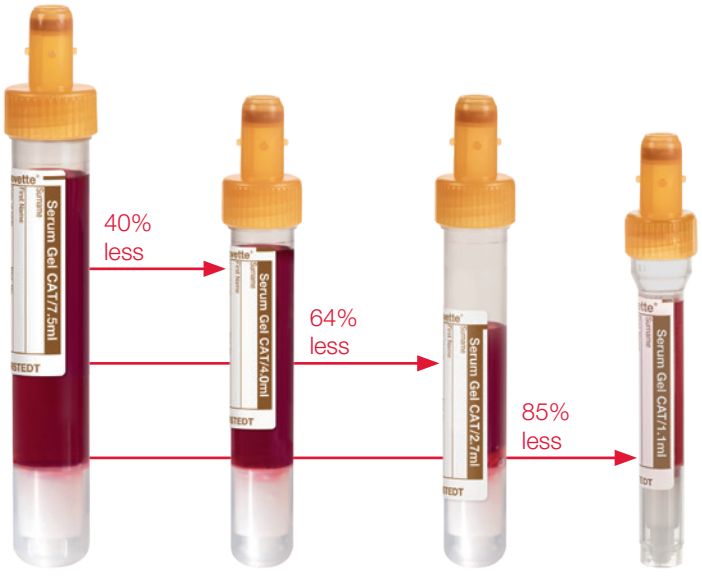
Patient **B**lood **M**anagement – small volume, big effect

For optimal patient blood management (PBM), SARSTEDT offers the standard versions of the S-Monovette® as well as specially developed, volume-reduced options. This allows the blood volume to be adjusted precisely to individual requirements.

- Blood loss from laboratory diagnostics is significantly reduced.
- Hospital-acquired anaemia is reduced.
- Stress for the patient is lower.

Learn more about blood collection in pediatrics.

sarstedt.com/s-monovette-us-pediatrics



Standard 7.5 ml | Reduced 4.0 ml | Small volume 2.7 ml | Pediatrics 1.1 ml

Information on optimal patient blood management can be found here:

sarstedt.com/s-monovette-us-pbm

SARSTEDT

Great care

The right S-Monovette® for every use

Find the right S-Monovette® for your use:

sarstedt.com/s-monovette-us

What matters to you matters to us

The S-Monovette® blood collection system has already been proven millions of times over and we are continuously expanding our range in close collaboration with our customers. For the best possible care, whether in pediatrics, geriatrics, oncology or the emergency department.

SARSTEDT

Our strength: more than standard

In addition to the standard designs, we also offer a variety of special versions, such as small volumes, platelet function analysis, immediate glucose stabilization or the excellent stabilization of cfDNA. The best possible specimen quality is achieved even in young children and the elderly with difficult vein conditions.

S-Monovette® cfDNA Exact
Stabilization of cfDNA without introducing gDNA

S-Monovette® RNA Exact
Stabilization of RNA for maximum RNA yields and fast RNA extraction

S-Monovette® GlucoEXACT
Stabilization of the glucose concentration for up to 96 h at room temperature

S-Monovette® ThromboExact
EDTA-free stabilization for the diagnostic exclusion of false low platelet counts due to anticoagulant intolerance

S-Monovette® HirundinMonovette
Special stabilization for platelet function measurement on the ROCHE Multiplate® device

S-Monovette® Serum Gel LightPROTECT
Special light protection from blood collection to archiving

S-Monovette® Homocystein
Stabilization of the homocysteine concentration in the blood sample for up to 8 h (not centrifuged) or 96 h (centrifuged)

S-Monovette® pre-barcode
No attaching labels, greater safety, more time for the things that matter – lower costs

SARSTEDT

Sustainable

Ecological sustainability for every blood sample.

Do you want to become more sustainable? The S-Monovette® can help you. Find out how!

sarstedt.com/
s-monovette-us-sustainable

Our contribution towards greater ecological sustainability

As a plastics processing company, we believe it is important to take particular responsibility for future generations. However, due to the high requirements for medical devices and laboratory products, there is no alternative to using high-quality plastic. Therefore, we strive to contribute to more sustainability through a variety of measures.

Our resource-saving product and packaging components and well-designed concept make the S-Monovette® especially sustainable compared to other blood collection systems

The CO_2e and material reduction were recorded by evaluating the weight and the materials used.
To compare blood collection systems, three S-Monovettes were compared with three vacuum tubes, including their respective needles.

The result of this examination clearly highlights the ecological advantages of using the S-Monovette® blood collection system:

- 40% less CO_2e per blood sample
- 32% less material used compared to vacuum systems
- 93% less rubber with the S-Monovette® cap
- 10% lower emissions by using PP instead of PET

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The SARSTEDT principle is to minimize the use of raw materials for both the product and packaging components of the S-Monovette®. The **“Guidelines for Green & Sustainable Laboratories”** of the EFLM* Task Force Green Labs describe the requirements for plastics and packaging in section 5.2.1.1.

Medical laboratories can become certified as a Green Lab, and SARSTEDT supports this by providing product and packaging components that save resources!

More information about Green Lab can be found at greenlabs.eflm.eu

User-friendly cardboard packaging that allows environmentally friendly production and disposal: The S-Monovette® box can be folded flat to considerably reduce waste volume.

330 S-Monovette® Safety Needles can be disposed of in a 4-l Multi-Safe box. Five times the number of disposal boxes would be required for the same number of needles incl. needle holders from other blood collection systems.

* European Federation of Clinical Chemistry and Laboratory Medicine

SARSTEDT

Everything from a single source

Benefit from coordinated systems

As a leading global provider of preanalytical solutions and systems, SARSTEDT's innovations have made a considerable contribution to making the preanalytical workflow more reliable and efficient – from blood collection to automated sample handling.

Let us advise you

In addition to high-quality products and coordinated system solutions, we focus on the individual consulting and training of our customers.

We have developed the SARSTEDT Preanalytical Consultancy Program (SPCP) – a holistic concept that aims to qualitatively and quantitatively identify preanalytical error sources and implement a subsequent action plan for sustained optimisation.

SARSTEDT pcp

preanalytical consultancy program

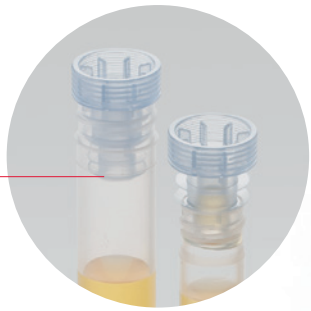
Let's work together!

sarstedt.com/s-monovette-us-p-wf

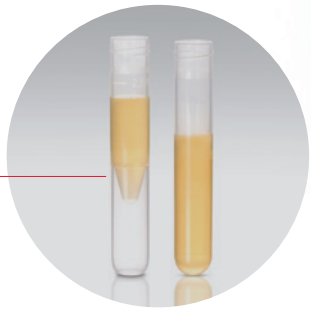
sarstedt.com/s-monovette-us-hello

Pre-barcoded tubes

Storage systems



Caps



Secondary tubes

HSS High Speed Sorter

sarstedt.com/s-monovette-us-hss

AL-Flex Aliquoter

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Pre Analytical Workflow

Sample collection tubes

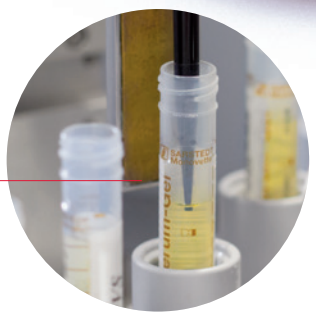
- ✓ Optimal specimen quality
- ✓ Direct transport
- ✓ Automated sorting & distribution
- ✓ Reliable archiving

Tempus600®
Sample Transport

sarstedt.com/
s-monovette-us-gaintime

Sample
transport case

Postal shipping systems



Bulk Sorter BL 1200

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If you have any questions:

We'd be happy to help!

Visit our website: www.sarstedt.com

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