

S-Monovette® Lithium-Heparin Gel+

Reliable sample quality at reduced Turn-Around-Time (TAT)



Improved patient care thanks to optimized centrifugation

- Centrifugation time reduced by up to 50%
- Faster therapy decisions
- Optimized equipment utilization at improved workflow



S-Monovette® Lithium-Heparin Gel⁺ – for improved laboratory efficiency

Laboratory results influence therapy decisions by 70% to 85%^{1,2}. For both the doctor and the patient, it is important that laboratory results are incorporated into therapy decisions quickly and without compromise.

Especially in emergency diagnostics, a reduced Turn-Around-Time (TAT) can impact the vital care of the patient. With half the centrifugation time, the S-Monovette® Lithium-Heparin Gel⁺ complements the reliable S-Monovette® blood collection system to make laboratory results available faster.

By improving the rheological properties of our proven polyacrylate gel, **the centrifugation time of the S-Monovette® Lithium-Heparin Gel⁺ can be reduced by up to 50% at full sample quality.**

As a result, the continuous sample flow supports optimal instrument utilization and ensures improved patient care.

Centrifugation conditions

Sample centrifugation is an essential component within preanalytics that must be carried out with special care in order to avoid erroneous laboratory results, and consequently, also possible misdiagnoses.

As conclusive evaluation criteria for an optimal sample quality and, thus, optimal centrifugation conditions, the intactness of the gel layer, hemolysis, and the stability of three cell-sensitive parameters (phosphate, glucose, LDH) over a period of several days were selected.

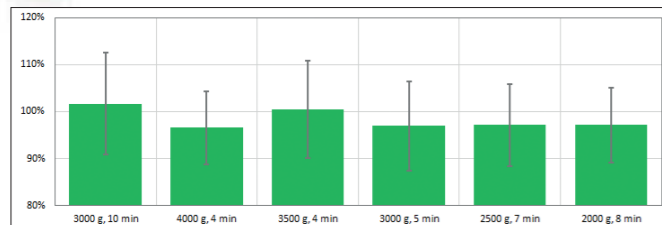


Figure 1 LDH recovery rate after 7 days

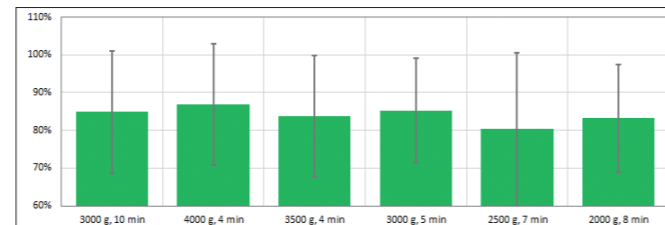


Figure 2 Glucose recovery rate after 7 days

This results in a separate centrifugation window for the S-Monovette® Lithium-Heparin Gel⁺ as for all other S-Monovettes, within which the optimum sample quality is achieved.

Minimum centrifugation time

S-Monovette®	Relative centrifugal force [g]				
	2000	2500	3000	3500	4000
Lithium-Heparin Gel	15 min	15 min	10 min	7 min	7 min
Lithium-Heparin Gel ⁺	8 min	7 min	5 min	4 min	4 min

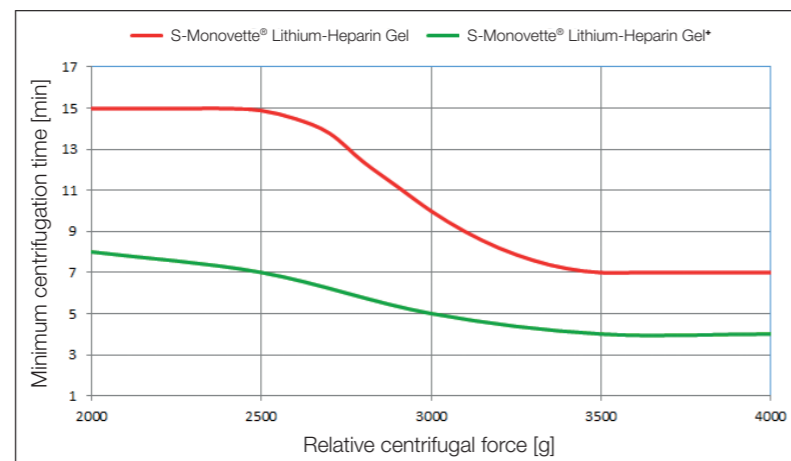


Figure 3 Graphical illustration of the centrifugation conditions for the S-Monovette® Lithium-Heparin Gel and the S-Monovette® Lithium-Heparin Gel⁺

Clinical equivalence of the S-Monovette® LH Gel⁺ on Roche cobas analyzers (excerpt from the study³)

In a comparative study with 30 donors, the S-Monovette® Lithium-Heparin Gel was compared with the S-Monovette® Lithium-Heparin Gel⁺ and the S-Monovette® Lithium-Heparin without gel. 57 frequently requested parameters were evaluated on Roche cobas analyzers, and no clinically significant differences were found between the individual blood collection tubes (Figure 4). The study was presented as a poster at the DGKL Congress 2018 in Mannheim and can be ordered from marketing@sarstedt.com. The following diagram shows the measured deviations compared to the acceptance limits (according to Rili-BÄK or Westgard) for the individual analytes. As can be seen from the diagram, the measured deviations are considerably smaller than the acceptance limits.

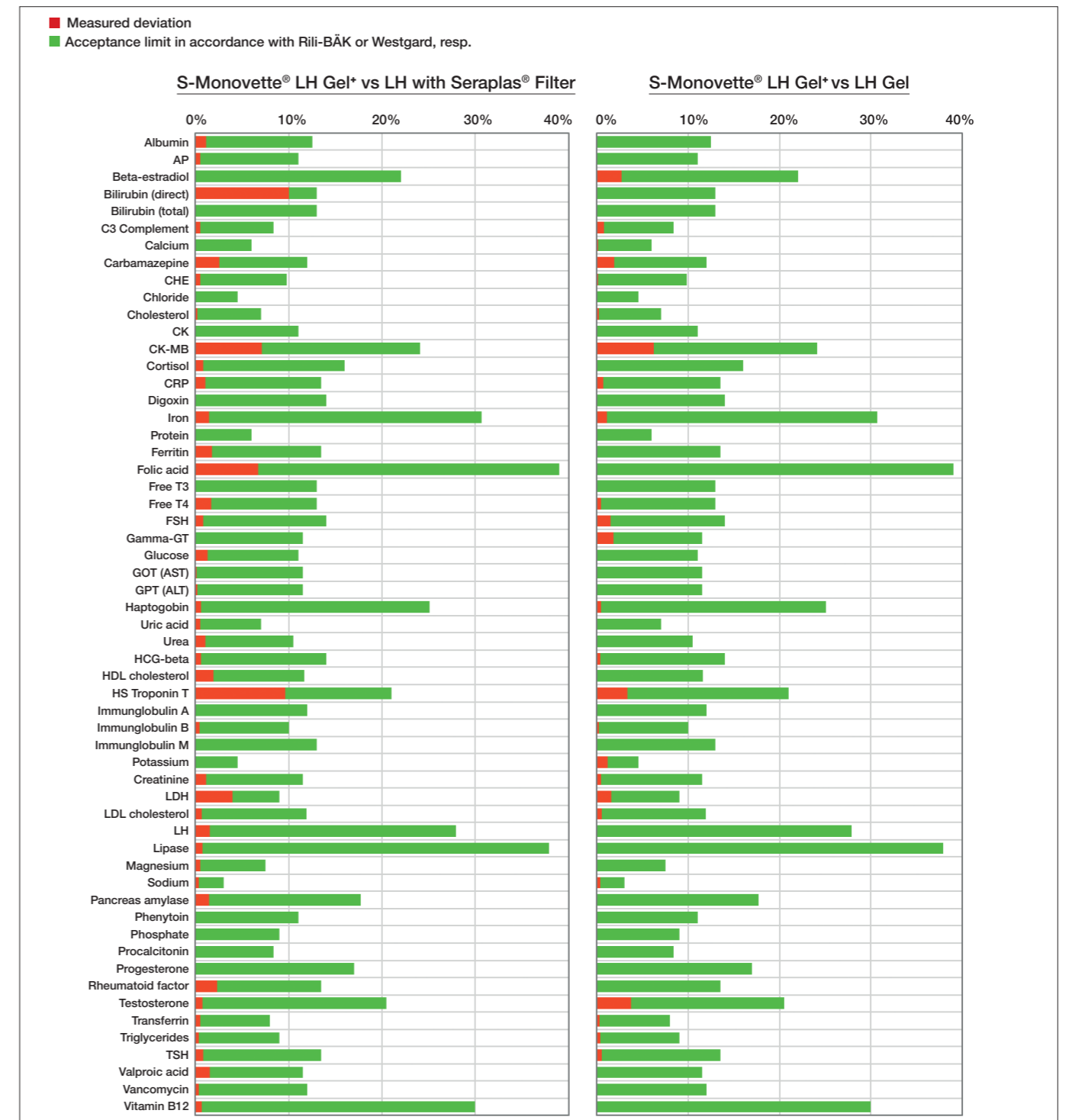


Figure 4 Comparison of the S-Monovette® Lithium-Heparin with Seraplas® Filter/Lithium-Heparin Gel against the S-Monovette® Lithium-Heparin Gel⁺. The table shows the positive median of the deviation between the blood collection tubes. All blood collection tubes were centrifuged at 3,000 x g for 10 minutes. Measurements were taken on a Roche cobas c 702 or a 602 module. RF and C3 were measured on a Siemens BN Prospec.

S-Monovette® Lithium-Heparin Gel* - for improved patient care

Stability of analytes in the S-Monovette® Lithium-Heparin Gel* (Excerpt from the study³)


The 57 analytes from the comparative study were re-measured after one week of storage at 2-8 °C. The concentration change in the S-Monovette® Lithium-Heparin Gel* over this time is not clinically significant for 55 analytes. Only glucose and potassium change more strongly than the acceptance limits and should be analyzed close to the time of blood collection. Cell-sensitive analytes such as phosphate show a slower change in concentration in the S-Monovette® Lithium-Heparin Gel* than in the S-Monovette® Lithium-Heparin Gel.

¹ Lippi et al Preanalytical variability: the dark side of the moon in laboratory testing JLabMed 2006;30(3):129-136

² Foubister The technologist/technician shortfall is putting the squeeze on laboratories nationwide, CAP TODAY September 2000

³ Whitepaper Scheer et al S-Monovette® Lithium-Heparin Gel* vs S-Monovette® Lithium-Heparin mit Seraplas® Filter und S-Monovette® Lithium-Heparin Gel* vs S-Monovette® Lithium-Heparin Gel Klinische Äquivalenz auf Roche cobas Geräten 2018

Ordering information

Order No.	Description	Volume	Length / Ø	Color code
04.1952.200	S-Monovette® Lithium-Heparin Gel*	2.7 ml	75 mm x 13 mm	
04.1953.200	S-Monovette® Lithium-Heparin Gel*	4.0 ml	75 mm x 13 mm	
04.1954.200	S-Monovette® Lithium-Heparin Gel*	4.9 ml	90 mm x 13 mm	

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