S-Monovette® HCY-Z-Gel
Stability of HCY concentration for up to 96 hours after blood collection
Hyperhomocysteinaemia is an important, independent risk factor for arteriosclerotic and neurodegenerative diseases\textsuperscript{1-4}. For diagnostic purposes, the total homocysteine concentration (tHCY) in the blood plasma is determined. During this procedure, compliance with preanalytical requirements is compulsory because, even after blood collection, erythrocytes in the sample continue to produce homocysteine that diffuses into the plasma. Studies\textsuperscript{1} indicate an increase of approximately 1 μmol/l per hour (equivalent to 10 %, from a basic value of 10 μmol/l). A comparable increase has also been shown in serum.

Several stabilizers\textsuperscript{1} have been developed to stop this increase:

Sodium fluoride causes an initial osmotic dilution of the plasma that delays but does not stop the increase of homocysteine values. Another stabilizer, 3-Deazaadenosine adversely affects immunoassays and is, therefore, only suited for HPLC determination. Furthermore, the sample must be stored in a cool environment from collection through analysis.

The **S-Monovette\textsuperscript{®} HCY-Z-Gel** (Art. No. 04.1908.001) now enables stable homocysteine values from serum for up to 96 hours after blood collection:

A specially developed stabilizer keeps the homocysteine concentration virtually constant for up to eight hours after blood collection at room temperature. Centrifugation of the sample within this 8-hour period results in an inert gel barrier that safely separates the serum from the blood clot, ensuring further stability of the homocysteine values for a total of 96 hours.
Shortly after collection, homocysteine determination in serum or plasma from non-stabilized blood shows erroneously high values. While literature indicates double values after 24 hours\textsuperscript{1,2}, homocysteine levels continue to increase beyond this point. There is no particular difference between serum and plasma.

In contrast, the graph demonstrates effective stabilization of the homocysteine serum values determined with the S-Monovette\textsuperscript{®} HCY-Z-Gel. Even four days after blood collection, homocysteine values remain virtually unchanged.

The S-Monovette\textsuperscript{®} HCY-Z-Gel has been tested on the following instruments to validate its suitability for three entirely different determination methods.

**Abbott AxSYM:** FPIA

**HPLC:** RP-FD

**Immulite 2000:** CLIA
References


Ordering Information

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<td>50 pcs./inner box 500 pcs./case</td>
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