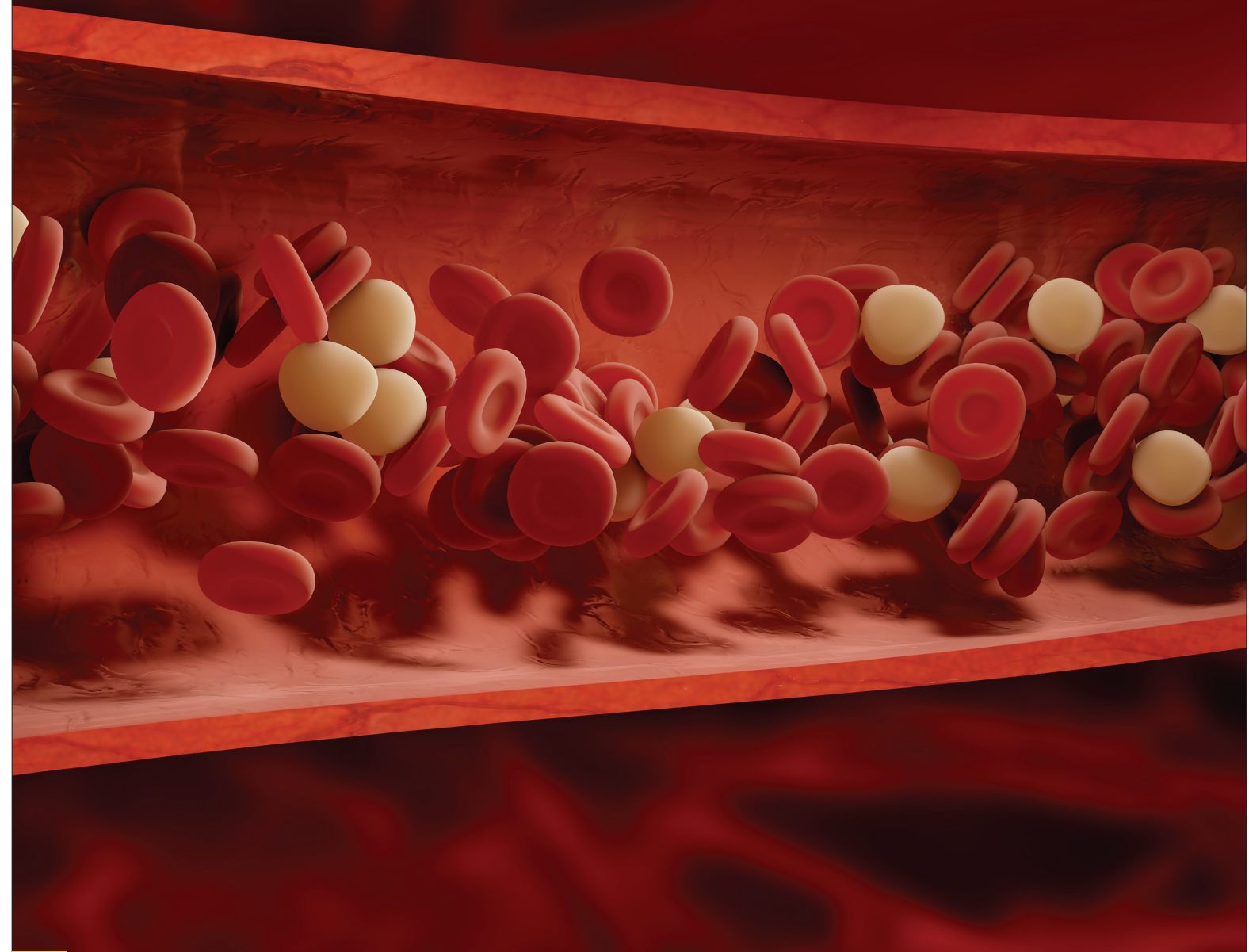
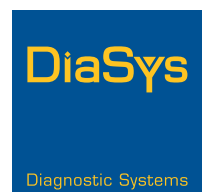


Homocysteine

Enzymatic Cycling Method



Efficient. Specific. Easy-to-use.



CHOOSING QUALITY.

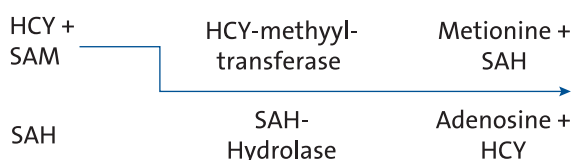
Clinical Relevance

Homocysteine is a sulfur amino acid and a product of methionine metabolism. The metabolism of homocysteine requires B-vitamins, including folate, vitamin B12, vitamin B6, and riboflavin. Disruption of homocysteine metabolism due to B-vitamin deficiencies, genetic defects, or other pathophysiological conditions leads to elevation of homocysteine in the blood (hyperhomocysteinemia). Hyperhomocysteinemia is a risk factor for vascular disease, neurodegenerative disease, and other clinical conditions. B-vitamin supplements are effective in lowering blood homocysteine concentrations.

Recommendation

Homocysteine measurement in high-risk patients and their relatives are recommended. Furthermore, HCY determinations should be used to assess the total risk profile of patients with manifest cardiovascular disease.

Principle



The DiaSys Homocysteine Assay is based on enzymatic cycling method. In a first step oxidized Hcy is first reduced to free Hcy which then reacts with a co-substrate, S-adenosylmethionine (SAM) catalyzed by a Hcy S-methyltransferase to form methionine.

In second step, The formed HCY is cycled in to homocysteine conversion reaction to amplify the detection signal whereas the adenosine is immediately hydrolysed into inosine and ammonia which is processed by the glutamate dehydrogenase with concomitant conversion of NADH to NAD⁺

The concentration of Hcy in the sample is directly proportional to the amount of NADH converted to NAD⁺ (A340nm).

Reference Range

Up to 15 $\mu\text{mol/L}$ is used for normal value in adults.

Linearity

The test is linear up to 50 $\mu\text{mol/L}$.

Sensitivity/Limit of Detection

The sensitivity limit, which is the minimum concentration that can be distinguished by zero is 3 $\mu\text{mol/L}$.

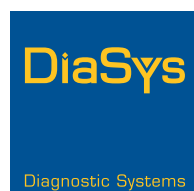
Precision

Intra Assay Precision	Mean ($\mu\text{mol/L}$)	CV (%)
Sample 1	7	4.5
Sample 2	12	1.87
Sample 3	15.6	3.04
Sample 4	29	2.4

Intra Assay Precision	Mean ($\mu\text{mol/L}$)	CV (%)
Sample 1	7	5.87
Sample 2	12	4.88
Sample 3	15.6	5.51
Sample 4	29	2.57

Order Information

Product	Homocysteine
Use	System kit*
Cat.No.	136619934841
Content	R1: 2 x 18.4;R2: 2 x 5 mL



DiaSys
Diagnosics India Private Limited
Plot No. A-821, TTC Industrial Area,
MIDC, Mahape, Navi-Mumbai, 400710,
Maharashtra, India.

Toll free: 1800 120 1447
E-Mail : info@diasys.in
www.diasys.in

PT/22/001
Jun 2022