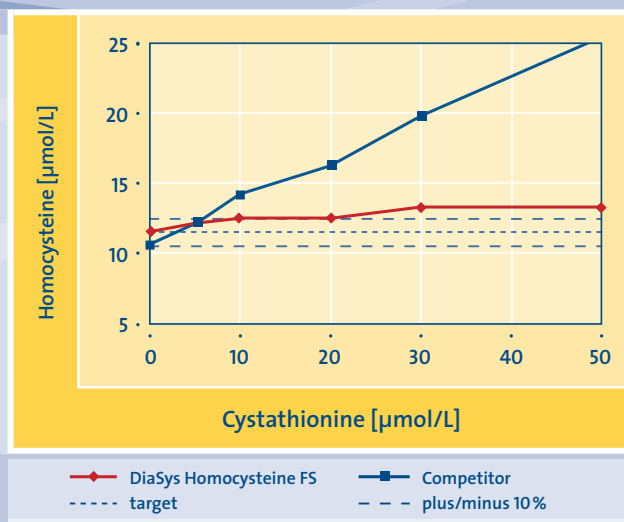
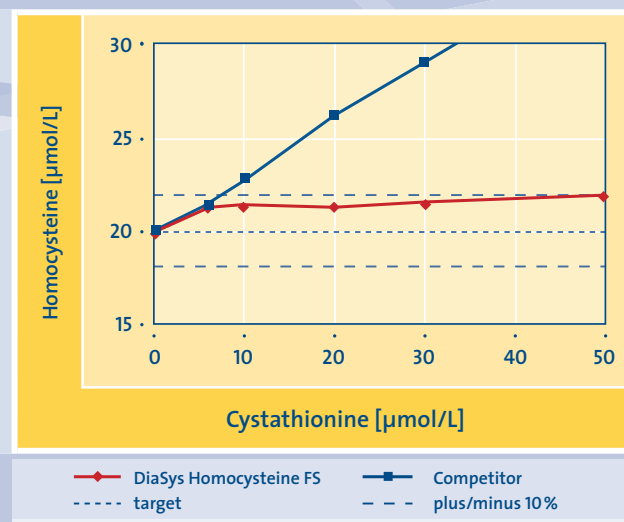




Sample 11.83  $\mu\text{mol/L}$  Hcy

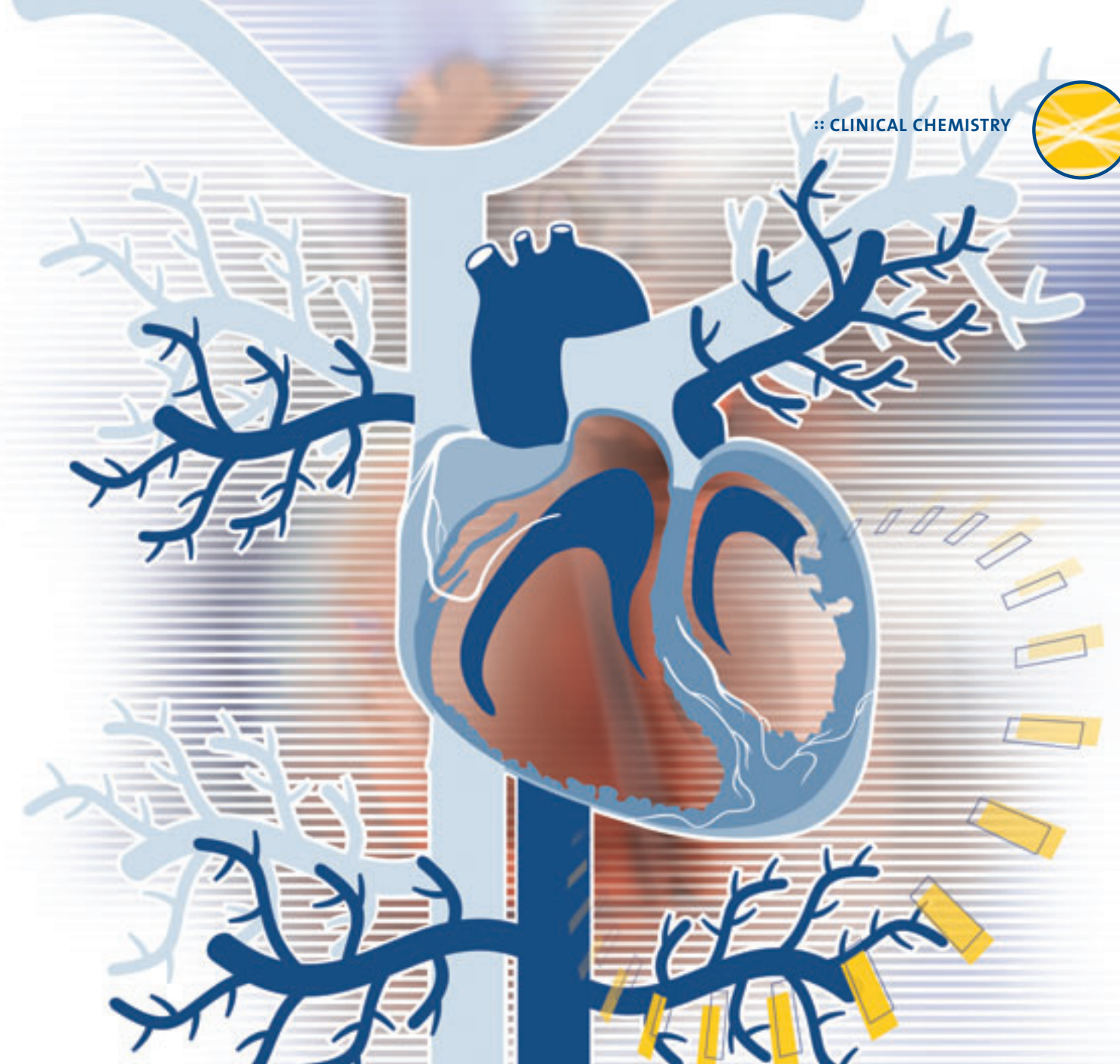


Sample 20.7  $\mu\text{mol/L}$  Hcy



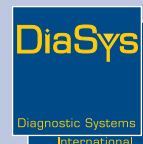
HOMOCYSTEINE FS						
Cat. No.	Kit size					
1 3409 99 10 730	R1 4 x 12.5 mL	+	R2 1 x 8 mL	+	R3 1 x 6 mL	Kit for automated systems** Full Hitachi bar code
1 3409 99 10 930	R1 4 x 12.5 mL	+	R2 1 x 8 mL	+	R3 1 x 6 mL	Hitachi 917 *** kit Full Hitachi 917 bar code
CALIBRATOR						
1 3400 99 10 041	3 x 1 mL	TruCal Homocysteine				
CONTROL						
5 9770 99 10 046	3 x 1 mL	TruLab Homocysteine Level 1				
5 9780 99 10 046	3 x 1 mL	TruLab Homocysteine Level 2				

\*\* Bottles suitable for Hitachi 704/911/912/902/717, Abbott Aeroset, Merck MEGA  
\*\*\* Bottles suitable for Hitachi 917, Olympus AU, Bayer Advia



## HOMOCYSTEINE FS

- :: Enzymatic Cycling Method
- :: Liquid-stable, ready-to-use reagent
- :: Adaptable to any clinical chemistry analyzer
- :: Measuring range up to 50  $\mu\text{mol/L}$



DiaSys Diagnostic Systems GmbH  
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820024 | August 2008



## Clinical use

Homocysteine (Hcy) is a sulfur-containing amino acid which is an intermediate in the methionine cycle. Increased plasma Hcy is a sensitive marker of folate and cobalamin (vitamin B12) deficiency and an independent risk factor for cardiovascular disease (CVD). Plasma Hcy concentrations are also related to birth defects, pregnancy complications, psychiatric disorders and cognitive impairment in the elderly.

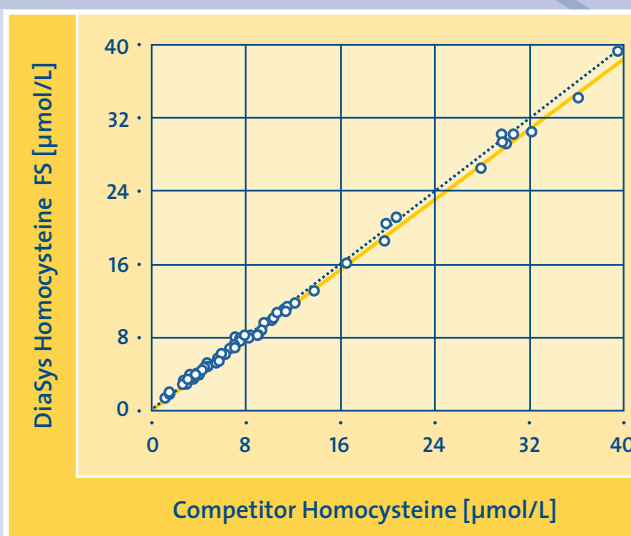
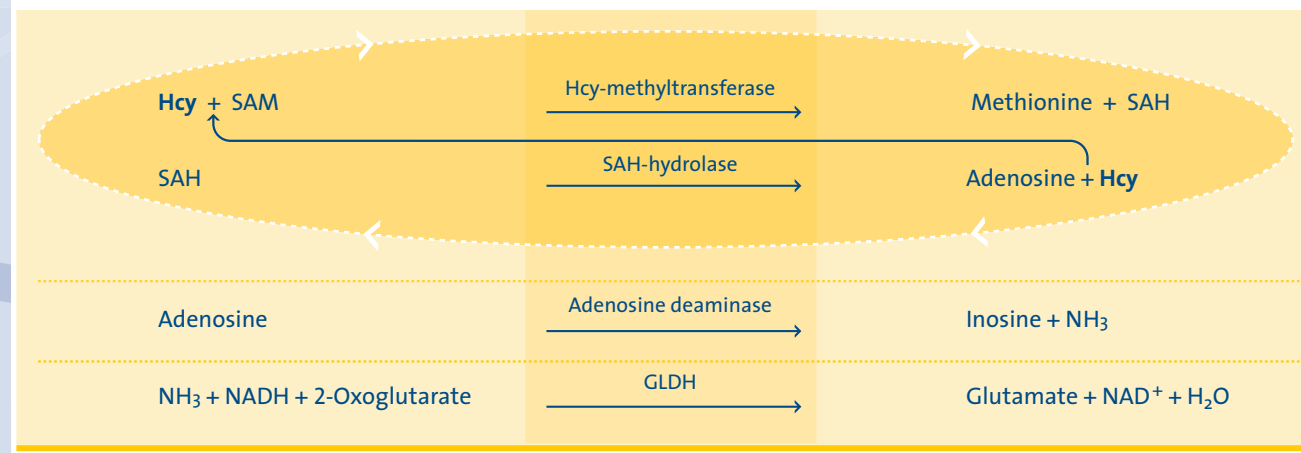
## Method

Oxidized total homocysteine (Hcy) is reduced to free Hcy. The free Hcy reacts with a co-substrate, S-adenosyl-methionine (SAM) catalyzed by Hcy S-methyltransferase to form methionine and S-adenosyl homocysteine (SAH). SAH is hydrolysed into adenosine and Hcy by SAH-hydrolase. The formed Hcy is cycled into the Hcy conversion reaction by Hcy-S-methyltransferase. The cycling reaction leads to significant amplification of detection signals. The formed adenosine is immediately hydrolysed into inosine and ammonia which is processed by glutamate dehydrogenase with concomitant conversion of NADH to NAD<sup>+</sup>. The decrease of NADH is measured at 340 nm and is proportional to the amount of Hcy in the sample.

## DiaSys Homocysteine FS

- ⌘ Liquid-stable, ready-to-use 3-component reagent
- ⌘ Can also be used as 2-component reagent
- ⌘ Use of serum or EDTA/heparin plasma
- ⌘ Measuring range up to 50 µmol/L
- ⌘ Wavelength 340 nm
- ⌘ Linear calibration (2 point)
- ⌘ No interference by lipids, hemoglobin and cystathionine
- ⌘ Good correlation to other enzymatic methods and HPLC
- ⌘ Liquid stable calibrators and controls

## Principle



n = 72,  
Passing/Bablok regression:  
 $y = 1.013x - 0.162 \mu\text{mol/L}$ ,  
 $r = 0.978$