CUSTOMBIOTECH

Aspartate Aminotransferase (AST)

Test principle: UV test

L-Aspartate + α-ketoglutarate $\xrightarrow{\text{AST}}$ oxaloacetate + L-glutamate

Oxaloacetate + NADH + H^+ $\xrightarrow{\text{MDH}}$ L-malate + NAD^+

Method according to the International Federation of Clinical Chemistry (IFCC), without pyridoxal-5'-phosphate. AST in the sample catalyzes the transfer of an amino group between L-aspartate and α-ketoglutarate to form oxaloacetate and L-glutamate. The oxaloacetate then reacts with NADH in the presence of malate dehydrogenase (MDH) to form NAD^+.

The rate of the NADH oxidation is directly proportional to the catalytic AST activity. It is determined by measuring the decrease in absorbance at 340 nm.

Proposed reagent composition

approximately 2+1 formulation

Reagent 1

Composition	Concentration	Catalog Number
Buffer (TRIS, pH 7.8)	280 mmol/l	10 153 265 001
L-Aspartate	800 mmol/l	
Malate dehydrogenase (MDH)	>2.1 kU/l	10 267 155 103
Lactate dehydrogenase (LDH)	>3.0 kU/l	10 679 666 103 or 12 235 650 103
Detergent, preservative, stabilizer, such as Sodium azide		
Triton X-100	0.01 %	10 743 119 103
Albumin	0.25 %	10 738 328 103

Reagent 2

Composition	Concentration	Catalog Number
NADH	>1.7 mmol/l	10 004 642 103
α-Ketoglutarate, di-Na	94 mmol/l	10 040 584 103
Preservative, such as Sodium azide		

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