



CK -MB KIT

PRINCIPLE:

This procedure involves measurement of Creatinine Kinase (CK) activity in the presence of an antibody to Ck-M monomer. This antibody completely inhibits the activity of CK-MM and half of the activity of CK-MB while not affecting the B subunit activity of CK-MB and CK-BB.

CONTENTS & STABILITY:

1. Reagent R1 : Ready – To – Use
2. Reagent R2 : Ready – To – Use

The Reagents are ready - To - Use and are stable upto Expiry mentioned on the label.

REAGENT PREPARATION:

Mix 4 parts of R1+ 1 part of R2. The combined Reagent is stable for 2 weeks at 2^o - 8^o C. Protect from direct light

SPECIMEN:

Serum is the sample of choice. Loss of activity at 25^o C after 1 hour is 10%.

PROCEDURE:

Equilibrate the reagent tubes at 37^o C before addition of sample.

ASSAY PARAMETER:

Mode : Kinetic.
 Wave Length : 340nm.
 Cuvette : 1cm path length.
 Reaction Slope : Increasing.
 Incubation Temperature: 37^o C.
 Blank : Water Blank.
 Reagents Volume : 1000 ul.
 Sample Volume : 40 ul.
 Delay time : 300 sec.
 Reaction time : 300 sec.
 Number of reading : 5.
 Factor : 8254.
 Linearity : 1000 u/L.
 Units : u/L.

MANUAL ASSAY:

Pipette into cuvettes	Macro	Semi-Micro
Reagent (R1 + R2)	1000 ul	500 ul
Sample	40 ul	20ul

Mix & incubate for 5minutes and read the absorbance of all the cuvettes at 340 nm., and repeat reading every minute for the next FIVE minutes. Calculate the mean absorbance per minute (A/min.)

NORMAL VALUES:

	25 ^o C	30 ^o C	37 ^o C
CK-MB	<10 u/L	<15 u/L	<24 u/L

CLINICAL SIGNIFICANCE:

CK-MB levels increases significantly 4-6 hours following a myocardial infarction & Peak at around 12 to 24 hours after the infarct. The levels return to normal in case of no further myocardial damage after 24 - 48 hrs. Hence the increased levels of CK-MB along with elevated levels of CK-NAC is a good indicator of myocardial infarction.

REFERENCES:

1. V. Wurzburg, N. Heirrich, H. Long, W. Prellwitz, D. Neumeier and M. Knedell: Klin. Wschr. 54, 357 (1976).
2. Long, H., Wurzburg, U., Clin. Chem., 1439, (1982).
3. Stein, W., Medwelt, 36, (1985), 572-577.