

α -Amylase

CNPG 3 Substrate

Code : 11003/11004 (10 ml/6x30ml)

(For the Analyser estimation of α -Amylase in Plasma / Serum)

In VITRO USE Only.

SUMMARY & EXPLANATION OF TEST :

α -Amylase hydrolyzes the 2-chloro-4-nitrophenyl α -D-maltotriose (CNPG₃) to release 2-chloronitrophenol and form 2-chloro-4-nitrophenyl α -D-maltose (CNPG₂), maltotriose (G₃) and glucose (G). The rate of formation of the 2-chloro-4-nitrophenol can be detected spectrophotometrically at 405 nm to give a measurement of α -amylase activity in the sample

REAGENTS :

1. α -Amylase CNPG₃ Reagent 10 ml 6x30 ml

The reagents are ready to use and stable at 2-8°C till the expire date mentioned on the label.

SAMPLE :

Non-haemolyzed serum is the recommended sample. Separate serum from clot after blood collection. Plasma for heparin tubes may be used, but other anti-coagulants such as EDTA or citrate should not be used.

EXPECTED RANGE :

α -Amylase : 25 - 98 U/l

LINEARITY :

This method is linear upto 2000 U/l. Samples exceeding 2000 U/l should be diluted and reassayed. The result has to be multiplied by the dilution factor.

INSTRUCTIONS :

1. Avoid contamination of the reagent with salivary α -amylase. α -amylase in saliva may be present at levels 1000 times greater than is found in serum. DO NOT PIPETTE By MOUTH.
2. Sodium azide may react with lead or copper plumping to form potentially explosive metal azides. On disposal, flush with a large volume of water to prevent azide build up.
3. Grossly haemolyzed samples should not be used.

DIRECTIONS FOR USE ON ANALYSERS :

Reaction Type : Kinetic with factor
Wave Length : 405 nm
Incubation Temp : 37°C
Incubation Time : 60 Sec.
Read Time : 180 Sec.
No. of Readings : 4
Interval Time : 60 Sec.
Sample Volume : 25 μ l
Reagent Volume : 1ml
Light path : 1 cm
Linearity : upto 2000 U/l
Unit : U/l
Factor : 3178

PROCEDURE :

α -Amylase Reagent	1 ML
Sample	25 μ l

Mixwell and read absorbance against Distilled water exactly after 60 seconds. Read again at constant intervals of 60 seconds for 3 minutes.

CALCULATIONS :

α -Amylase (U/l) = $\Delta A/\text{min} \times 3178$

NOTES :

★ Due to variations in inter-laboratory assay conditions, instruments and demography, it is recommended that each laboratory should establish its own normal range. To ensure adequate quality control, each run should include a normal and abnormal assayed controls. The assigned value of the control must be confirmed by this methodology.

★ Final diagnosis should be based on a co-relation of test results with other clinical observations / Diagnostic tools.

BIBLIOGRAPHY :

1. Ranson, JHC. Curr Prob Surg 1979 ; 16:1
2. Salt WB II, Schenker S. Medicine 1976 ; 55:269
3. Stefanini P, Ermini M, Carboni M J Am Surg 1965 ; 110 : 866

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