

INTRODUCTION

1. **Infinite** α -Amylase is a reagent set for determination of amylase activity based on kinetic method using Gal G₂ - α CNP.
2. **Infinite** α -Amylase is a **ready-to-use reagent**.
3. **Infinite** α -Amylase can be determined in just **2½ minutes** at 37°C.
4. **Infinite** α -Amylase is **linear** upto 2000 IU/l.
5. **Infinite** α -Amylase is a **High Stability Reagent**.
6. **Infinite** α -Amylase can be used on any **Spectrophotometer, Discrete semiautomated and Automated analyzers**. Programme can be designed for any specific analyzer upon request.

PRINCIPLE

Amylase test involves use of a chromogenic substrate Gal G₂ - α CNP (2-chloro-4-nitrophenyl linked with galactosylmaltoside). The direct action of amylase with this substrate results in the release of more than 90% of 2-chloro-4-nitrophenol, which can be monitored by kinetic assay at 405 nm. The increase in absorbance is directly proportional to the amylase activity in sample.



PREPARATION OF WORKING SOLUTION

The reagent is ready-to-use.

REAGENT STORAGE & STABILITY

The kit should be stored at 2-8°C and is stable till the expiry date indicated on the label. The reagent is ready-to-use and stable till expiry, when stored at 2-8°C.

DO NOT FREEZE THE REAGENT. Contamination of the reagent should be strictly avoided.

COMPONENTS & CONCENTRATION OF WORKING SOLUTION

Component	Concentration
• Buffer, pH 6.0	50 mmol/l
• Gal G ₂ - α CNP	2.60 mmol/l
• KSCN	140 mmol/l
• Activators & Stabilizers	

SPECIMEN COLLECTION & PRESERVATION

Blood should be collected in a clean dry container. Avoid the use of plastic or siliconized container as it may prolong clotting time. Although serum is preferred, plasma with heparin can be used. EDTA, Oxalate or Citrate inhibit the amylase activity and hence cannot be used. Amylase activity is stable in serum for 20 days at 2-8°C.

PROCEDURE

- Reaction type Kinetic
- Reaction direction Increasing
- Wavelength 405 nm.
- Flowcell temperature 37°C (\pm 0.2°C)
- Zero setting with Distilled water
- Delay time 60 seconds
- No. of readings 4
- Interval 30 seconds
- Blank absorbance limit < 0.500 Abs.
- Sample volume 0.02 ml (20 μ l)
- Reagent volume 1.0 ml
- Factor 3806
- Linearity 2000 IU/l

Manual assay procedure

Prewarm at 37°C the required amount of working solution before use.

Perform the assay as given below :

1.0 ml procedure

Specimen	0.02 ml (20 μ l)
Working solution.....	1.0 ml

Mix thoroughly and transfer the assay mixture immediately to the thermostated cuvette and start the stop watch simultaneously. Record the first reading at 60th second and subsequently three more readings with 30 seconds interval at 405 nm.

Calculation:

Calculate the average change in absorbance per minute.

(Δ Abs./30 seconds x 2)

Activity of amylase in IU/l = Δ Abs./min x 3806

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NOTE :

Saliva and sweat contain α -Amylase. To avoid possible contamination do not pipette by mouth and avoid contact of the reagent and pipette tips with the skin.

EXPECTED VALUES

< 96 IU/l at 37°C

NOTE :

1. The expected value of amylase is dependant on the substrate used in the formulation. Results cannot be compared with kits based on formulation using other substrates.
2. Since the expected values are affected by age, sex, diet and geographical location, each laboratory is strongly urged to establish its own reference range for this procedure.

