



# Glucose

Version: 1

Edited by: John Stack, Gary Cline: Yale MMPC Analytical Core

**Summary:** Procedure used to measure glucose concentrations. Glucose is measured by the enzymatically coupled reactions of hexokinase and glucose-6-P dehydrogenase. The rate of NADH formation is monitored by the change in absorbance at 340 nm.

## Reagents and Materials:

Reagent/Material	Vendor	Stock Number
Glucose Reagent 1	Prolabs	R84682
Glucose Reagent 2	Prolabs	R84682
Multi Analyte Calibrator	Prolabs	R60010
Assayed Control Serum 1	Prolabs	R83082
Assayed Control Serum 2	Prolabs	R83083

**Protocol:** Analysis by automated system Cobas Mira Plus

- 1) Calibrate Cobas for Glucose analysis by running a multi analyte standard and two control serum.
- 2) Sample Handling as performed by the Cobas Mira Plus.
  - a) Pipette 3  $\mu$ L of sample into cuvette.
  - b) Absorbance is measured at 340 nm.
  - c) Add 100  $\mu$ L of Glucose liquid reagent.
  - d) Mixture is incubated at 37°C for 10 minutes.
  - e) Absorbance is measured at 340 nm. Change in absorbance is calculated.

## Reagent Preparation:

Glucose Reagent 1: As supplied by Vendor

Glucose Reagent 2: As supplied by Vendor

Multi Analyte Calibrator: Add the appropriate amount of water (6.5mL) to the chemical control bottle. Invert to mix, allowing 15 minutes for the reagent to settle.

Assayed Control Serum 1: Add the appropriate amount of water (6.5mL) to the chemical control bottle. Invert to mix, allowing 15 minutes for the reagent to settle.

Assayed Control Serum 2: Add the appropriate amount of water (6.5mL) to the chemical control bottle. Invert to mix, allowing 15 minutes for the reagent to settle.