

Calcium

Version: 1 Edited by: John Stack, Gary Cline: Yale MMPC Analytical Core

Summary: Procedure used to determine the concentration of calcium in blood, serum, and plasma. Calcium is measured as the complex with arsenazo III and monitored at 600nm.

Reagents and Materials:

Reagent/Material	Vendor	Stock Number
Calcium Liquid Reagent	Prolabs	R85188
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 Calcium analysis by running a multi analyte standard and two assayed control serum.

2) Sample handling as performed by the Cobas Mira Plus.

- a) Pipette 5μ L of sample into a cuvette slot.
- b) Add 180 µL of Calcium Liquid Reagent.
- c) Mixture is incubated at 37°C and spun for 10 minutes.
- d) Absorbance is measured at 650nm.

Reagent Preparation:

Calcium Liquid Reagent: 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.