CURRENT

Category: Biochemistry
Title: Estimation of Glucose on Mini CHEM 100 using serum samples
SOP No.: 10/03
Date first effective: 1st January 2025 **Review date:** 31st December 2025

Department of Clinical Pharmacology, 1st Floor, New MS Building,
Seth GS Medical College & KEM Hospital, Parel, Mumbai 400012

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1. Purpose

The purpose of this Standard Operating Procedure (SOP) is to outline the procedure for estimation of glucose on Mini CHEM 100 in the Biochemistry lab of Department of Clinical Pharmacology.

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2. Scope

This SOP covers the procedure of estimation of glucose on Mini CHEM 100 in serum.

3. Responsibility

Lab technician, Lab attendant, or any other appropriately qualified staff in the team, designated by the Head of Department, will be responsible for analysis.

4. Reference

- Departmental SOP no 10/05: Blood collection.
- Departmental SOP no 24/04: Waste management.
- Biochemistry labs SOP no 10/03: Mini CHEM 100instrument.
- Kit insert

5. Detailed Instructions

1. The whole blood sample is collected in Sodium fluoride bulb as per departmental SOP no. 10/04 and is processed as per biochemistry lab SOP no 01/04.
2. Remove the kit kept in the **Refrigerator** located in the main Biochemistry laboratory of Department of Clinical Pharmacology, M.S. Building, 1st Floor.
   Use kit:- SPIN REACT
   KIT Expiry: 2 years after the manufacturing date mentioned on kit

Manufactured by: - SPIN REACT

Reagent 1: Glucose (Reagent is ready to use)

Standard Solution: 100mg/dl

- The unopened reagent remains stable till expiry date at 2-8°C, when protected from contamination.

3. As per the instruction displayed on the machine, aspirate distilled water for washing purpose taken from Milli Q water purifier .
4. Press **GLU** displayed on the machine.
5. When Glucose parameters are displayed, water is aspirated, followed by reagent blank and sample in glass tubes. (the tubes uses for Mini CHEM 100 are kept in a labeled box on left side of the machine).
6. Dilution is prepared by adding **10µl** of distilled water in **1000µl** of Glucose reagent in new glass tube.
7. Add **10µl** of standard in **1000µl** of Glucose reagent in new glass tube.
8. **Add 10µl** of sample in **1000µl** of Glucose reagent in new glass tube.
9. For more than one sample, **add 10µl** of sample in **1000µl** of Glucose reagent in new glass tube.
10. Mix well and incubate for 15 minute at 37°C in an incubator in biochemistry lab.
11. Aspirate the standard followed by the samples(Glucose standard: 100 mg/dl)
12. Calculation is done automatically by the machine. Glucose activity **[mg/dl]**
13. **Linearity:** Upto 500mg/dl. For higher values it is recommended to dilute the samples with normal saline and repeat the assay. Multiply the results with the dilution factor.