

Category: Biochemistry

Title: Estimation of Urea on minichem ARK diagnostic system using serum samples

SOP No.: Biochemistry07/02

Date first effective: 01stJanuary2025

Review date: 31stDecember 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 urea on minichem ARK diagnostic in the Biochemistry lab of Department of Clinical Pharmacology.

2. Scope

This SOP covers the procedure for estimation of urea on minichem ARK diagnostics using serum samples.

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 01/01: Analysis usingminichem ARK diagnostic instrument.
- Kit inserts

5. Detailed Instructions

1. The whole blood sample is collected and processed as per SOP no. 10/05.
2. Remove the QCA reagent kit kept in the **Refrigerator**[between 2-8 degree Celsius] located in the main Biochemistry laboratory of Department of Clinical Pharmacology, M.S. Building, 1st Floor. Verify the expiry date before using the kit.

Use kit: QCA UREA Kit,

3. As per SOP no. 10/03 for Biochemistry analysis on minichem ARK Diagnostics, select the parameter 'UREA' and set the machine for measurement of the sample.

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4. As per the reagent kit insert, to 5 μ l of the sample add 400 μ l of reagent 1 and 100 μ l of reagent 2.
5. After addition of the reagents, immediately aspirate the test solution through the sipping tube by pressing the button behind the tube.
6. The machine will give a beep sound and will continue with the measurement of the concentration for a period of 120 seconds.
7. After the delay time of 120 seconds, the machine will beep and will display the absorbance followed by the reading.
8. Values are entered in the report, evaluated and signed by the biochemist/laboratory in charge and Study-coordinator and PI.
9. External Quality control of parameters is done every month from CMC QC Vellore
10. Once the UREA parameter is completed for all samples, aspirate distilled water for washing purpose.
11. After washing is completed, switch off the adaptor and then switch off the main switch.
12. Samples are discarded as per departmental SOP no. 24/02 (SOP of waste management).