



HEALTH HOLDING

HAFER ALBATIN HEALTH
CLUSTER
MATERNITY AND
CHILDREN HOSPITAL

Department:	Laboratory and Blood Bank (Chemistry)		
Document:	Internal Policy and Procedure		
Title:	Procedure of Creatinine Clearance		
Applies To:	All Laboratory Staff		
Preparation Date:	January 02, 2025	Index No:	LB-IPP-039
Approval Date:	January 16, 2025	Version:	2
Effective Date:	February 16, 2025	Replacement No.:	LB-IPP-039(1)
Review Date:	February 16, 2028	No. of Pages:	02

1. PURPOSE:

- 1.1 Establish system and set responsibilities so that samples requested for creatinine clearance are provided to clinical chemistry section.

2. DEFINITONS:

N/A

3. POLICY:

- 3.1 Creatinine clearance is a test used to assess renal function using 24 hour urine collection.
- 3.2 Serum blood samples ideally collected at the midpoint of the urine collection or no later than 24 hours after urine collection.

4. PROCEDURE:

4.1 Specimen:

- 4.1.1 24-hour urine specimen collection (must kept refrigerated)
- 4.1.2 Serum blood samples ideally collected at the midpoint of the urine collection or no later than 24 hours after urine collection.
- 4.1.3 Patient must maintain an adequate fluid intake during 24-h urine collection.
- 4.1.4 Coffee, tea, heavy exercise. medication should be avoided
- 4.1.5 Each decade of life accounts for a decrease of about 6.5 ml / min.
- 4.1.6 Creatinine excretion varies with regard to lean body mass
- 4.1.7 Patient's weight and height should be provided.
- 4.1.8 Hydrate patient by administering a minimum of 600 ml water

4.2 Calculation:

- 4.2.1 $\text{Creatinine clearance} = \frac{\text{Urine creatinine}}{\text{plasma creatinine}} \times \frac{\text{urine volume}}{24 \text{ h}/1440 \text{ min}}$

4.3 Result interpretation:

- 4.3.1 Reference range:

Male: 97-137 ml/min

Female:88-128 ml/min

- 4.3.1.1 To correct for average body weight particularly for children should return to nomograms. 6.2.

5. MATERIAL AND EQUIPMENT:

- 5.1 Refer to creatinine reagent leaflet of DimensionEXL200

6. RESPONSIBILITIES:

- 6.1 Chemistry shift on charge is responsible for, running calibration and control and samples of creatinine
- 6.2 Chemistry staff are responsible for running creatinine samples all over the day

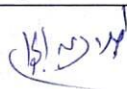
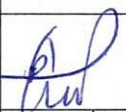

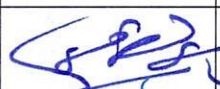

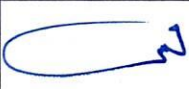
7. APPENDICES:

- 7.1 N/A

8. REFERENCES:

- 8.1 Tietz Text Book of clinical chemistry and molecular diagnostics 4th Edition,2006

9. APPROVALS:

	Name	Title	Signature	Date
Prepared by:	Dr. Talal Abdelgawad	Clinical Pathologist		January 02, 2025
Reviewed by:	Dr. Kawther M. Abdou	Consultant & Lab. Medical Director		January 08, 2025
Reviewed by:	Ms. Noora Melfi Alanizi	Laboratory & Blood Bank Director		January 09, 2025
Reviewed by:	Mr. Abdulelah Ayed Al Mutairi	QM&PS Director		January 12, 2025
Reviewed by:	Dr. Tamer Mohamed Naguib	Medical Director		January 12, 2025
Approved by:	Mr. Fahad Hazam Alshammari	Hospital Director		January 16, 2025