

Department:	Laboratory and Blood Bank (Hormone)		
Document:	Internal Policy and Procedure		
Title:	Quick Guide for DELFIA PerkinElmer		
Applies To:	All Laboratory Staff		
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1. PURPOSE:

1.1 This policy provides all the information about the handling and operational technique for the DE LFIA Perkin Elmer dispenser / Washer and Reader.

2. DEFINITONS:

2.1 N/A

3. POLICY:

3.1 Dissociation enhanced lanthanide fluorescence (TRF) intensity technology based on fluorescence of lanthanide chelates to screen TSH for neonates of our hospital.

4. PROCEDURE:

4.1 Principle of the DELFIA hTSH Ultra immunometric assay method.

4.2 **Safety precautions:**

- 4.2.1 Biological: Treat all sample materials as infectious.
- 4.2.2 Chemical: Be care of some chemicals that can cause irritation.
- 4.2.3 Physical: Avoid touching the probes and other moving parts during operation, which may cause injury.
- 4.2.4 Electrical: Make sure that machine is directly plugged to emergency socket not through an extension cord.

4.3 **Method:**

- 4.3.1 Prepare the work sheet with the lot No of the test, the date, the file number and sequence of samples.
- 4.3.2 Standards (6levels) should be run on duplicate.

- 4.3.3 Pipette 100 ul of TSH standards patient serum specimens into the strip wells according to the work sheet.

- 4.3.4 Add 100 ul of diluted tracer solution into all wells.

- 4.3.5 Incubate for 2 hours (± 10 minutes) at RT with slow shaking using DELFIA plates shaker.

- 4.3.6 Washing the plate by the prepared washing solution.

- 4.3.7 Add 200ul of enhancement solution directly from the reagent bottle to each well.

- 4.3.8 Shake slowly for 5 minutes then measure the fluorescence emission within one hour.

- 4.3.9 Notes:

- 4.3.9.1 Don't mix identical reagents from kits having different lot numbers.

- 4.3.9.2 Anti-hTSH-Eu tracer stock solution should be prepared within one hour of use.

- 4.3.9.3 For the whole plate prepare 20 ml of the buffer to which 1 ml Anti-hTSH-Eu tracer.

- 4.3.9.4 To prepare wash solution add 40ml of wash concentrate to 960 ml D.W (25X).

4.4 **Operating the machine:**

- 4.4.1 **Start up:** Switch on the operation power of the machine, computer printer and monitor then enter operator ID and password and choose OK.
- 4.4.2 **Plate wash:** Open machine → Select → Run → yes → 42 h TSH ultra aw → yes → last strip → yes → yes
- 4.4.3 **Delfia reader:** Open the machine → open wia(wallac multical) → open wallac 1420 → protocol=TSH → Start → Next → Next → Next → put the plate → finish
- 4.4.4 **Shut down:** Press shut down → OK → computer turn off → switch of the main power → switch of the printer and monitor
- 4.4.5 **Weekly maintenance:**
 - 4.4.5.1 Cleaning and prime the dispenser
 - 4.4.5.2 Disinfection
 - 4.4.5.3 Prime and rinse the automated washer

5. MATERIALS AND EQUIPMENT:

5.1 **Non-consumable materials:**

- 5.1.1 Plate dispenser
- 5.1.2 Plate washer
- 5.1.3 DELFIA plate reader

5.2 **Consumable materials:**

- 5.2.1 h TSH standards (A, B, C, D, E, F)
- 5.2.2 Anti-hTSH-Eu tracer stock solution (mouse monoclonal)
- 5.2.3 Wash concentrate
- 5.2.4 H TSH Ultra assay buffer
- 5.2.5 Enhancement solution
- 5.2.6 Anti-hTSH microtitration strips

5.3 Maintenance form

6. RESPONSIBILITIES:

- 6.1 All staff in hormone unit

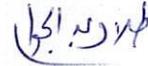
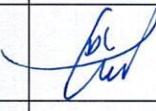
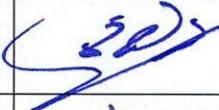
7. APPENDICES:

- 7.1 N/A

8. REFERENCES:

- 8.1 Operator manual of the machine

9. APPROVALS:

	Name	Title	Signature	Date
Prepared by:	Dr. Talal Abdalgawad	Clinical Pathologist		January 06, 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 20, 2025