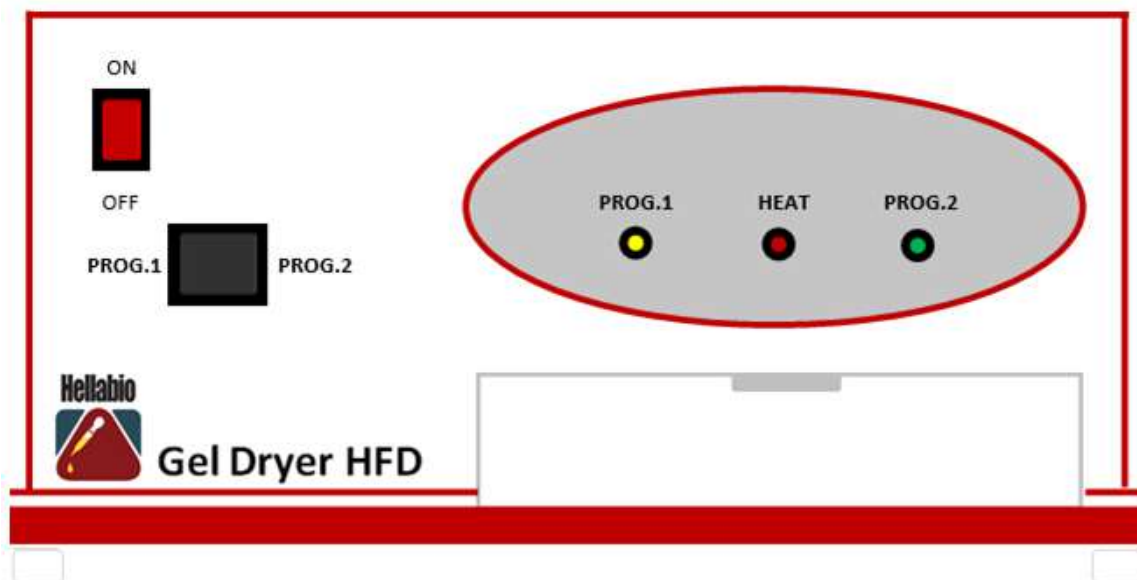




...means electrophoresis

Gel / Film Dryer HFD

User manual



1. INTRODUCTION & IDENTIFICATION

- Product Name: Gel / Film Dryer HFD
- Model: HFD
- UDI-DI: 5213012290122
- Manufacturer: Hellabio - Dimitriadis Ioannis and Son PC. Steliou Kazantzidi 47, 57001, Thermi, Greece.
- Intended Purpose: The HFD is an In Vitro Diagnostic (IVD) accessory instrument intended for professional use in clinical laboratories. It provides quick and uniform drying of agarose gels and electrophoresis films at controlled temperatures (80-85°C) to ensure clear diagnostic results.





2. SAFETY PRECAUTIONS & SYMBOLS


WARNING: HOT SURFACE!

- During operation, the internal chamber and the drawer reach temperatures up to 85°C. Handle with care.
- Do not block the air vents (fan area) as this may lead to overheating.
- Always connect the device to a grounded (earthed) power outlet.

SYMBOLS USED (ISO 15223-1 & EN 61010-1)

The following symbols are utilized on the device and packaging labels:

Symbol	Meaning	Standard
CE	CE Marking (Declaration of Conformity)	IVDR 2017/746
IVD	In Vitro Diagnostic Medical Device	ISO 15223-1
SN	Serial Number	ISO 15223-1
REF	Catalogue Number / Reference	ISO 15223-1
[i]	Consult Instructions for Use	ISO 15223-1
Manufacturer	Hellabio Logo & Address	ISO 15223-1
	Keep Dry	ISO 15223-1
	Temperature Limit	ISO 15223-1
WEEE	Do not dispose of municipal waste	Directive 2012/19/EU
	Caution: Risk of Electric Shock	EN 61010-1
	Caution: Hot Surface	ISO 7010-W017

Symbol	Meaning	Standard
	Fragile	ISO 7000

3. UNPACKING AND INSTALLATION

- Inspect the package for damage. The box should include: 1x HFD Device, 1x Power Cord, 1x Instructions for Use.
- Place the device on a flat, stable, and dry laboratory bench.
- Ensure at least 10cm of free space around the fan for proper air circulation.

4. OPERATION

The HFD features an automated heating and airflow system controlled via the main switch.

4.1. Preheating

- For optimal results, turn **ON** the device approximately 20 minutes before the end of the electrophoresis run.

4.2. Settings:

PROG 1 (Gel Drying): Used for drying the agarose gel immediately after electrophoresis.

- Temperature: Automatically increases to **80-85 °C**.
- Duration: **12-14 minutes**.
- *Procedure:* Place the film holder in the drawer, slide it in, and wait for the specified time.

PROG 2 (Film Drying): Used for final drying after the staining/destaining procedure.

- Switch to **PROG 2** to maintain the necessary temperature for final fixation.



4.3. Finishing the Run

- When drying is complete, gently pull out the film holder.
- **Caution:** Use the handle of the drawer to avoid contact with hot metallic parts.

5. MAINTENANCE & CALIBRATION

- **Cleaning:** Disconnect from power before cleaning. Use soft, damp cloth with mild detergent on the exterior. Do not use abrasive cleaners inside the chamber.
- **Fuse Replacement:** If the device does not turn on, check the fuse (T 2A) located in the power cord socket.

6. TECHNICAL SPECIFICATIONS

- **Input Voltage:** 230V AC \pm 10%, 50/60 Hz
- **Power Consumption:** 300W
- **Temperature Range:** 80°C - 85°C (Stabilized)
- **Safety Feature:** Hardware Thermal Head-Switch (70°C cut-off for electronics protection).
- **Dimensions:** Suitable for gels up to 12x15 cm.
- **Service Life:** 7 years

7. TROUBLESHOOTING (Error Codes)

- **Device does not work:** Check power plug and main fuse.
- **No heat / Fan not spinning:** Turn off for 1 minute and restart. If the problem persists, the internal thermal switch may have been triggered due to blocked airflow. Contact Hellabio Technical Support.
- **Gel not drying:** Ensure the fan is not obstructed and the drawer is fully closed.

8. DISPOSAL & ENVIRONMENTAL PROTECTION

WEEE Compliance: This device must not be treated as household waste. It must be handed over to an applicable collection point for the recycling of electrical and electronic equipment. Before disposal, ensure the device is decontaminated from any biological hazards.

9. NOTICE TO USER

Any serious incident that has occurred in relation to the device shall be reported to the manufacturer (Hellabio) and the competent authority of the Member State in which the user and/or the patient is established (e.g., EOF in Greece).

Gel / Film Dryer HFD - Instructions for Use (IFU)

Code IFU/HFD_V2_EN

Edition 2

Syntax Quality Manager

Approval CEO

SYNTAX (NAME-TITLE-SIGNATURE)
<p>Quality Manager Gavriilidou Maria</p>

APPROVAL (NAME-TITLE-SIGNATURE)
<p>CEO Dimitriadis Ioannis</p>

LIST OF MODIFICATIONS			
Revised edition	Date	Description	Adopted by
2	26/03/2026	Update format and addition of symbols for regulatory compliance	CEO

The Quality Management Department is responsible for making the process available.

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The procedure does not apply if it is not signed by the CEO and the Quality Manager