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FlashGel® System

Important Safety Information and Quick Start Guide

Safety symbols

The following symbols alert the user to important operational, maintenance, and/or warranty requirements, or possible hazards exposure.

CAUTION: Hazardous Voltage.
Contact may cause death or serious injury

Caution should be exercised in the operation of this system as it can develop sufficient voltage and current to produce a lethal shock. To avoid any risk of injury, the system should only be operated by properly trained personnel and always in accordance with the instructions provided with The FlashGel® Dock, or found at www.lonza.com/protocols.

Prior to turning on the DC power source, ensure that the black lead is connected to the negative terminal and the red lead is connected to the positive terminal. Do not touch the FlashGel® Dock or Cassette while the high voltage supply is turned on. Do not add or recover samples to the FlashGel® Cassette while the high voltage leads are connected to the power supply.

Failure to adhere to the instructions could result in personal and/or laboratory hazards, as well as invalidate any warranty. Always turn off the DC power source prior to removing cassettes from the dock. For maximum safety, always operate this system in an isolated, low traffic area, not accessible to unauthorized personnel. Never operate damaged equipment.

Precautions

The dock utilizes a visible light transilluminator to view fragments. It is safe to view cassettes on the lighted dock without UV light protection. Turn on the light only after the cassette is in place. Do not stare directly into the light.

Wear gloves, lab coat and safety glasses when handling FlashGel® Cassettes. The gel and buffer in FlashGel® Cassettes contain a proprietary DNA stain that is a potential mutagen. Follow state and local guidelines for handling and disposal of these materials.

Complete system instructions

Complete system instructions, including additional safety and warranty information are provided with The FlashGel® Dock. These can also be obtained on our website www.lonza.com/protocols, or by contacting Scientific Support.

Scientific Support:

US: (800) 521-0390;
scientific.support@lonza.com
Europe: 00 32 87 321 611;
scientific.support.eu@lonza.com
International: +1 (207) 594-3400;
scientific.support@lonza.com

Ordering Information:

Please see our website www.flashgel.com

Operating conditions for FlashGel® Dock

Environmental Conditions

Operating Conditions:

- Temperature: 15°C-35°C
- Humidity: 15%-85% relative humidity, non-condensing

Storage and Shipping Conditions:

- Temperature: 2°C-60°C
- Humidity: 15%-85% relative humidity, non-condensing

Cleaning and Disposal

Clean the FlashGel® Dock exterior with a cloth moistened with water or mild detergent. Do not immerse! The stain in FlashGel® Cassettes is a potential mutagen. Follow country, state and local guidelines for disposal of hazardous materials.

Equipment Ratings

Electrophoresis input (high voltage DC):	Voltage: 300 VDC Power: 15 W Current: 50 mA
Dock light input (low voltage DC):	Voltage: 18 VDC Current: 1.11 A
Dock light transformer input (line voltage AC):	Voltage: 100–240 VAC, 50–60 Hz Current: 1.0 A
Electrical Connections:	High voltage (electrophoresis): shielded retractable banana plugs (male). Low voltage (light): 2.1 X 5.5 X 14 mm jack

FlashGel® System Quick Start Guide

- Refer to detailed instructions for sample preparation and run conditions (www.lonza.com/protocols).
- Cassette types are optimized for DNA, RNA or recovery.
- Do not exceed load volume of 5 µl for 12 + 1 and 16 + 1 cassettes and 12 µl for 8 + 1 cassettes.
- Optimal per band sample concentration is 1/5 that required for an ethidium bromide gel.

DNA Analysis with FlashGel® DNA Cassettes

1. Remove white seals from cassettes. Do not remove the clear vent seals.
2. Flood wells with distilled or deionized water. Blot away excess liquid – avoid directly blotting wells.
3. Insert cassette in to dock. If using double-tier cassettes, insert the FlashGel® Mask under the second tier.
4. Load samples.
5. Plug in and turn on dock light.
6. Set high voltage power supply to 275 V, plug in cables and turn on power supply.
7. Run until desired separation is reached, then turn off high voltage power supply and disconnect the cables.
8. Photograph using The FlashGel® Camera or other documentation system.

DNA Recovery with FlashGel® Recovery Cassettes

1. Follow steps 1 through 3 above.
2. Load samples to be recovered in the upper tier of sample wells.
3. Run until just prior to desired sample reaching the recovery wells (2nd tier), then stop the run and disconnect the high voltage cables.
4. Blot excess buffer from the recovery well(s) and add 20 µl of FlashGel® Recovery Buffer.
5. Remove the FlashGel® Mask, reconnect the cables and restart the power. Use the FlashGel® Visualization Glasses to observe band migration.
6. When the band of interest has migrated to the center of the recovery well, turn of the power supply and disconnect the cables.
7. Use a pipette to carefully remove the buffer containing the DNA. Recovery of high DNA loads may require repeating the process of loading recovery buffer and running the band further in to the well to maximize recovered volume.

RNA Analysis with FlashGel® RNA Cassettes

1. Follow the procedure for DNA analysis. RNA bands will be visible only for the first 3 to 4 minutes of the run.
2. Stop the run after 8 minutes and hold. The bands will be visible again after ≥ 10 minutes, depending upon RNA load intensity.