

## Encapsulated Loading of Electrophoresis Gels

### Alluvia™ Gel Loading Manifolds

**NEW Accessory that interfaces with commercial encapsulated disposable gels to continuously contain PCR products during gel electrophoresis.**



The Alluvia Gel Loading Manifolds (GLM's) are designed to interface with the leading disposable cartridge gel electrophoresis systems. The systems are prepared per the specific product protocol except instead of loading using pipet tips, the Alluvia GLM is attached on top of the gel cartridge via adhesive gaskets. PCR tube strips are then placed into the GLM receiving holes, the reusable GLM Injector is placed over the GLM and downward force is applied.

The downward movement of the tubes in the receiving holes compresses the tube walls generating internal positive pressure. As the tube nears full insertion, it is pushed over a razor blade located at the bottom of the manifold, which slits open the bottom of the tube. The internal pressure in the tube ejects the tube contents into the wells of the gel while maintaining continuous containment.

Electrophoresis is performed in the usual manner and the results are easily visualized through the GLM. After electrophoresis, the gel cartridge, GLM, and tubes are disposed as an assembled unit keeping the PCR products contained within.

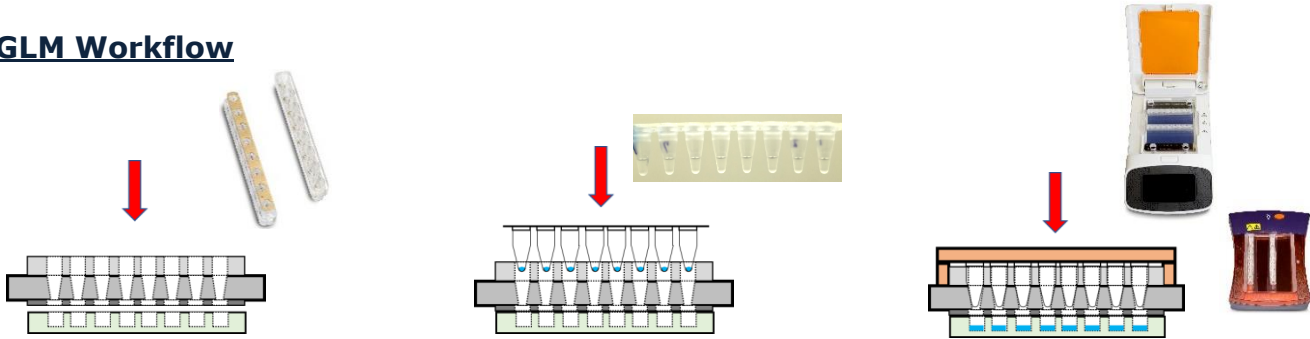
- Eliminates PCR product contamination risk during electrophoresis;**
- Eliminates the need to load the gel using a pipet;**
- Interfaces with commercially available disposable cartridge gels;**
- Interfaces with both Alluvia fluidic tube strips and standard PCR tubes and tube strips.**

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## **Gel Loading Manifolds (GLM's)**

Consumable adaptors and inserts that completely contain the transfer of PCR products from 8 tube strips into existing off-the-shelf disposable gel electrophoresis cartridges without the need of pipetting.

### **GLM Workflow**



1. Attach Alluvia GLM to an off-the-shelf disposable gel electrophoresis cartridge.

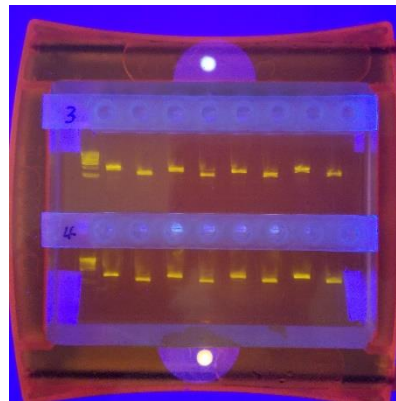
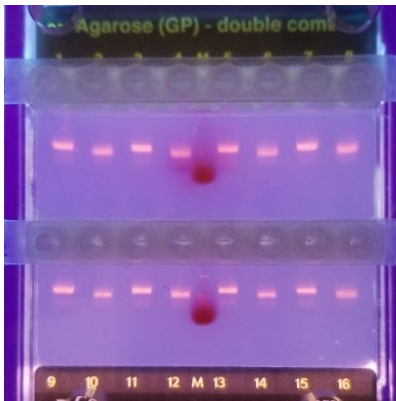
2. Load 8 tube strip containing post secondary PCR products into the GLM.

3. Press with Tube Injector to transfer PCR products into the gel cartridge, load assembly into instrument and run electrophoresis process.

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## **Gel Loading Manifold Results**

Kimantech's Alluvia System will eliminate the PCR product contamination risk that accompanies current open gel loading systems thereby enabling multiplex nested PCR using existing standard open PCR equipment and biochemistry workflows.



Cartridge Gels loaded with the Alluvia GLM system

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## **Product Specifications**

### **Alluvia Instrument**

- User Interface: Integrated touchscreen
- Configurability: 8 tube strip and 96 well inserts (Additional in process)
- Total Process Time: 2-5 minutes
- Dimensions: 25x35x35cm (WxDxH)
- Power requirements: 110V/220V, 50/60 Hz
- Safety and emission certification: CE, ETL

### **Plate Loading Modules (PLM)**

- Primary PCR Samples: 1 to 4
- Secondary PCR Conditions per Sample: 8, 24, 96...
- Primary PCR Dilution: 10x-250x
- Secondary PCR volumes: 10µl to 15µl

### **Gel Loading Module (GLM)**

- DNA Containment: >99.9%
- DNA Transfer Reliability: >99%
- DNA Volume Transfer: >50% Efficiency

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## **Gel Electrophoresis with Alluvia™**

***Contamination Containment - Improved Efficiency***