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FlashGel® System with FlashGel® FLX Cassettes Quick Start Guide

For FlashGel® FLX Cassettes (Cat. No. 317258, 317259, 317260, 317281)

Guidelines and instructions for use

For complete safety information, please refer to the FlashGel® System Manual – Your guide to setup and usage of the FlashGel® System.

Important points

- Do not exceed 5 µL sample volume per lane for 12 + 1 well and 16 + 1 well cassettes.
- Optimal sample concentrations are approximately 1/5 the typical per-band concentration of an ethidium bromide gel.
- Flood sample wells with water prior to loading, then load samples into wells filled with water.
- FlashGel® FLX Cassettes must use the appropriate **DNA or RNA Prestain Loading Buffer** for sample detection.
- Use the FlashGel® Mask when running double-tier cassettes.
- For best results with restriction enzyme digests: optimal loading levels are in the range of 20 – 40 ng of DNA. Minimize salt concentrations by using <1.5 µL of digest in the total sample (5 µL) for the FlashGel® FLX Cassette.

Instructions

1. Refer to Table 1 for recommended sample preparation and run conditions.
2. Remove white well seals and tear-off vent seals from cassette. Do not remove the black tips of vent seals remaining on the cassette.
3. Flood sample wells with distilled or deionized water. Tilt cassette to move excess fluid to the edge and blot off with a lint-free wipe. Do not blot wells directly. Leave wells filled with water for sample loading.
4. Insert cassette into dock. Insert FlashGel® Mask under the central tier of sample wells if using double-tier cassettes.
5. Load samples.
6. Plug in high voltage cables, turn on power supply and set to recommended voltage.
7. Plug in low voltage power supply and turn on viewing light as needed during run.
8. Run for recommended time or until separation of desired fragments is complete.
9. Photograph using FlashGel® Camera or other standard camera and transilluminator.

Table 1. Recommended sample preparation and run conditions for FlashGel® FLX Cassettes

Sample volume	5 µL
Optimal sample concentrations	Optimal DNA load levels are 5 – 20 ng/band in a 5 µL load. For best results, do not exceed 20 ng/band. Optimal RNA load levels will vary depending upon RNA sample. For best results, do not exceed 200 ng/band in a 5 µL load. For FlashGel® RNA Markers, 2.5 µL of a 10-fold dilution is suggested.
Sample preparation	**DNA Samples:** for best results, dilute 4 µL DNA sample in 1 µL FlashGel® FLX DNA Prestain Loading Buffer. You may need to pre-dilute DNA samples prior to this step to obtain final optimal DNA load levels as described above. **Denatured RNA samples:** dilute RNA samples in RNase-free water, then combine 2.5 µL diluted RNA sample and 2.5 µL FlashGel® FLX RNA Prestain Loading Buffer. The final 5 µL load should not exceed 200 ng RNA/band. Denature for 5 minutes at 70°C.
Voltage and run time	**DNA Samples:** **Single-tier:** 275 V for 2 – 7 minutes **Double-tier:** 275 V for 2 – 5 minutes **RNA Samples:** **Single-tier:** 200 V for 10 minutes **Double-tier:** 200 V for 3 – 5 minutes
Separation range	**1.2%:** 100 bp – 10 kb DNA 0.5 – 9 kb RNA **2.2%:** 20 bp – 1 kb DNA Separation of fragments > 4 kb will be improved by running longer at lower voltage. Detection of small fragments will be improved by running longer at lower voltage.
Recommended markers	**DNA Samples:** **1.2%:** FlashGel® DNA Marker 100 bp – 4 kb **2.2%:** FlashGel® DNA Marker 50 bp – 1.5 kb **Double-tier cassettes:** FlashGel® DNA Marker 100 bp – 3 kb **RNA Samples:** FlashGel® RNA Marker 0.5 kb – 9 kb

Ordering information

FlashGel® System – FlashGel® FLX Format

Cat. no.	Product name	Size/format
317258	FlashGel® FLX Cassettes	1.2% agarose, 12+1 well single-tier format, 9 pk
317259	FlashGel® FLX Cassettes	1.2% agarose, 16+1 well double-tier format, 9 pk
317260	FlashGel® FLX Cassettes	2.2% agarose, 12+1 well single-tier format, 9 pk
317281	FlashGel® FLX Cassettes	2.2% agarose, 16+1 well double-tier format, 9 pk
316992	FlashGel® FLX DNA Prestain Loading Buffer	5x loading buffer with DNA stain,1 mL
316993	FlashGel® FLX RNA Prestain Loading Buffer	2x loading buffer with RNA stain,1 mL
50473	FlashGel® DNA Marker, 100 bp – 4 kb	500 µL ready-to-load, recommended for 1.2% cassettes Band sizes: 100/200/300/ 500/800/1250/2000/4000 bp
57033	FlashGel® DNA Marker, 50 bp – 1.5 kb	500 µL ready-to-load, recommended for 2.2% cassettes Band sizes: 50/100/150/200/ 300/500/800/1500 bp
57034	FlashGel® DNA Marker, 100 bp – 3 kb	500 µL ready-to-load, recommended for double-tier cassettes Band sizes:100/300/500/ 800/1500/3000 bp
50577	FlashGel® RNA Marker	0.5 bp – 9 kb, 50 µg (1 µg/ mL) Band sizes:100/300/500/ 800/1500/3000 bp

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 MB-OP003 08/25

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