Fluo-DNA /RNA Loading Buffer

Product Information:

Contains: 6x Fluorescent DNA /RNA dye loading buffer (RNAse-free and Dnase-free, steriled).
Catalog Number: LB-002, LB-002G, LB-002B, LB-002GB, LB-002BX
Sizes: 1.0ml
Storage Conditions: Store at -20ºC, protected from light, stable for 1 year.

Order information (Product series):

- **Cat.: LB-002 contains 6x fluorescent DNA/RNA dyes without loading/tracking dye**
- **Cat.: LB-002G contains 6x fluorescent DNA/RNA dyes with loading/tracking dye (Orange G : ~50bp)**
- **Cat.: LB-002B contains 6x fluorescent dyes with loading/tracking dye (Bromophenol blue: ~400bp)**
- **Cat.: LB-002GB contains 6x fluorescent dyes & tracking dyes (orange G / Bromophenol blue:~50- 400bp)**
- **Cat.: LB-002BX contains 6x fluorescent dyes & tracking dyes (Bromophenol blue/Xylene cyanol:~400-4kb)**

Features and Benefits:

1. **Safe:** Non-toxic and non-genotoxicity for waste disposal, directly into the wastewater systems or clean up with water and 70% ethanol. No need to expose your skin and eyes on UV light.
2. **Sensitive:** Detect down to 60 ng of DNA/RNA per band with blue light and 1-5 ng of DNA/RNA per band with UV light.
3. **Convenient**: Visualize DNA/RNA bands with a blue light transilluminator or U.V transilluminator during/after electrophoresis in TAE/TBE buffer.
4. **Effective:** Eliminating ultraviolet and EtBr induced mutation or cleavage of DNA/RNA fragments.
5. **Compatible:** Fluorescent DNA dye can be completely removed from nucleic acids by alcohol precipitation or Qiagen QIAquick Gel Extraction, suitable for downstream cloning/sub-cloning applications。

DNA Staining Protocol:

1. Prepare 0.5% to 2% of agarose gel solution in 1xTAE, TBE or Borate Buffer without Ethidium Bromide in a glass flask.
2. Heat in the microware until the solution is completely clear and no small floating particles are visible (about 2-3 minutes). Pour the gel solution into a gel tray after cool down. After the agarose gel has solidified you can perform electrophoresis.
3. Add 1-2 µl of the 6X fluo- DNA/RNA loading buffer (LB-002) to 5-10 µl DNA/RNA sample or DNA/RNA marker/ladder. Mix thoroughly.
4. Load samples and run the gel using your standard protocol.
5. View DNA/RNA bands using a blue light transilluminator during or after electrophoresis.
6. Images can be taken using a blue light transilluminator or a UV transilluminator.

Technical Tips:

1. **Loading 60ng-200ng DNA/RNA each lane is ideal for viewing DNA/RNA bands in agarose gels. Too much would affect the DNA/RNA migration.**
2. **Mix well the DNA/RNA samples or ladders with 6x fluo-DNA loading buffer by pipetting up and down for several times.**
3. **For removing Fluo-DNA dye from DNA samples by simple ethanol precipitation: add NaCl to a final concentration of 250mM, and then add 0.7 volume of pure ethanol to precipitate DNA, incubate on ice or -20°C for 20 minutes and spin down DNA at 4°C for 10 minutes, discard supernatant and dissolve DNA in TE buffer (10 mM Tris-Cl, pH 7.5; 1 mM EDTA).**
4. **Loading/tracking dye information:**

Colour dye	0.5-1.5% agarose	2.0-3.0% agarose	CAS number	Cat. No
Xylene cyanol	10'000-4000 bp	750-200 bp	2650-17-1	Sigma X4126
Cresol Red	2000-1000 bp	200-125 bp	62625-29-0	Sigma 114480
Bromophenol blue	500-400 bp	150-50 bp		Sigma B8026
Orange G	<100 bp	---		Sigma O3756

Precautions and Disclaimer:

This product and procedure described are intended for R&D use only. Purchase of this product does not convey a license to perform any patented process.

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