DTI Agarose Premium

Instruction Manual for use

User Manual for DTI Agarose premium

Catalogue number: DT1702.500

Note: Applicable to all pack sizes

Manufactured by
DSS Takara Bio India Pvt Ltd
A-5 Mohan Co-operative, Industrial Estate,
Mathura Road, New Delhi, Delhi 110044

1) Product Description:

Agarose electrophoresis is the most effective way to identify and separate DNA fragments. The purity of agarose directly affects the resolution of DNA and the clarity of electrophoresis results. If the agarose contains sugars, salts, proteins, it will affect the migration speed of DNA in the gel and subsequently the reaction performance of recovered DNA fragments during enzymatic reactions. Hence, using high quality agarose is important for success of the experiment.

DTI Agarose premium is a high-quality agarose product with high gel strength, suitable for making as low as 0.7% to high concentration 3% agarose gel. When stained with EtBr, the electrophoretic separation performance is strong, bands are clear with minimal background and is suitable for electrophoresis of various DNA fragments. It is an economical and ideal grade for conventional agarose electrophoresis.

Gel Concentration:

Agarose gel concentration and ideal resolution of linear DNA

Agarose concentration	Ideal linear DNA resolution range (bp)
1.0%	500-10,000
1.2%	400-7000
1.5%	200-3000
2.0%	50-2000
3.0%	50-2000

2) Product specifications:

Gel Strength (1.0% gel)	>1200 g/cm2
Gelling temperature	34.5-37.5°C
Electroendosmosis	0.05-0.13
Sulfate content	<0.1%

3) Procedure for preparation of Agarose gels:

i. Prepare an appropriate amount of buffer for electrophoresis and gel preparation (usually 0.5X TBE or 1X TAE).

ii. Depending on the gel required volume and gel concentration, add 'X' amount of electrophoresis buffer to the Erlenmeyer flask. Add accurately weighed agarose powder (the total liquid volume should not exceed 50% of the Erlenmeyer flask capacity).

Note: The buffer used for electrophoresis and the buffer used for gel preparation must be the same.

iii. Cover the mouth of the Erlenmeyer flask with plastic wrap, poke some small holes in the film, and then place it in the microwave. Dissolve agarose over medium heat. Please wear heat-resistant gloves. Shake the Erlenmeyer flask carefully to dissolve the agarose evenly. This operation is repeated several times until the agarose is completely dissolved. It must

be noted that the heating time in the microwave oven should not be too long. Stop heating when the solution boils, since this can cause change in concentration of gel.

iv. Preset the temperature of a hot air oven at 60°C and place the flask in the oven for 30 mins to gradually cool the agarose solution to about 60°C. If necessary, add ethidium bromide solution at this time (final concentration 0.5 mg/ml) and mix thoroughly.
Note: Ethidium bromide is a carcinogen. When using solutions containing ethidium bromide, please wear gloves. Alternately, SYBR green which is safer comparatively may be used using a blue-light transilluminator may also be used

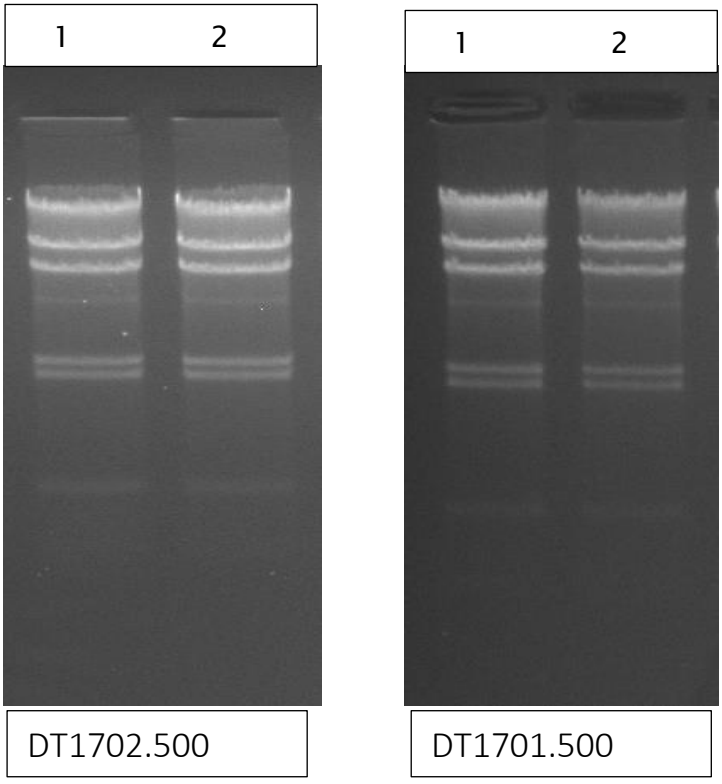
v. Pour the agarose solution into the gel mold and insert a comb at the appropriate position. The thickness of the gel is generally between 3 and 5 mm.

vi. Let the gel solidify at room temperature (about 30 minutes to 1 hour), and then place it in the electrophoresis tank. Perform electrophoresis.
Note : When the gel is not used immediately, please wrap the gel with plastic wrap and store it at 4°C. Generally, it can be stored for 2 to 5 days.

4) Experimental sample:

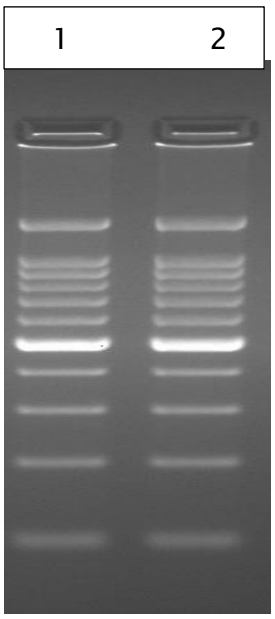
Comparative runs of DNA markers on DT1702.500 Agarose premium vs DT1701.500 Agarose Routine.

a) λ Hind III digest DNA Marker run on 0.7% Agarose gel made using TAE buffer



Lane #	Description	Fragment size for reference
1,2	Cat# 3403, λ Hind III digest DNA Marker	23130*, 9416, 6557, 4361*, 2322, 2027, 564, 125. The cohesive ends (12b cos site of bacteriophage lambda) of fragments 23130 bp and 4361 bp may be separated by heating to 65 ° C for 5 min.

b) 100 bp DNA Marker run on 3% Agarose gel made using TAE buffer



DT1702.500

DT1701.500

100bp DNa ladder (3422A)	
Voltage	200V
Run Time	90min
Gel Type	3%
Buffer	TAE

Lane #	Description	Fragment size for reference
1,2	Cat#DT1801.100, DTI 100bp Ladder (Dye Plus)	1500, 1000, 900, 800, 700, 600, 500, 400, 300, 200, 100 base pairs

Visit https://dsstakarabio.com/ for more detailed product information

For more information contact directly below;
Address: DSS Takara Bio India Pvt Ltd, A-5 Mohan Co-operative, Industrial Estate, Mathura Road, New Delhi, Delhi 110044

Email: enquiries@dsstakarabio.com
Toll-Free number 1800-212-4922

Description of Symbol Used:

REF Catalogue number

LOT Batch Code

Date of Manufacturing

Use-by-date

Contains sufficient for <n> tests