FuturePAGE™ HP Precast Protein Gel

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1.Product Description

FuturePAGE™ Precast Protein Gel are polyacrylamide electrophoresis gels designed to separate a wide range of protein sizes by electrophoresis.FuturePAGE™ Precast Protein Gel is 15wells,the maximum loading volume per well is 30 µL, with a recommended loading volume below 15 µL.Automatic gel casting technology provide excellent batch to batch consistency and higher quality. The unique gel buffer formula makes the protein electrophoresis strips sharper and higher resolution.The neutral pH of the buffer avoids the re-modification of proteins during electrophoresis and improves the stability of the gels.

2.Gel Separation Range

Precautions: When using this product, be sure to use a specialized electrophoresis buffer.
It is recommended to directly use the ACE-matched specialized electrophoresis buffer:
MES-SDS Running Buffer (Catalog number: BR0002-01).
The MES-SDS Running Buffer is not recommended to be reused..

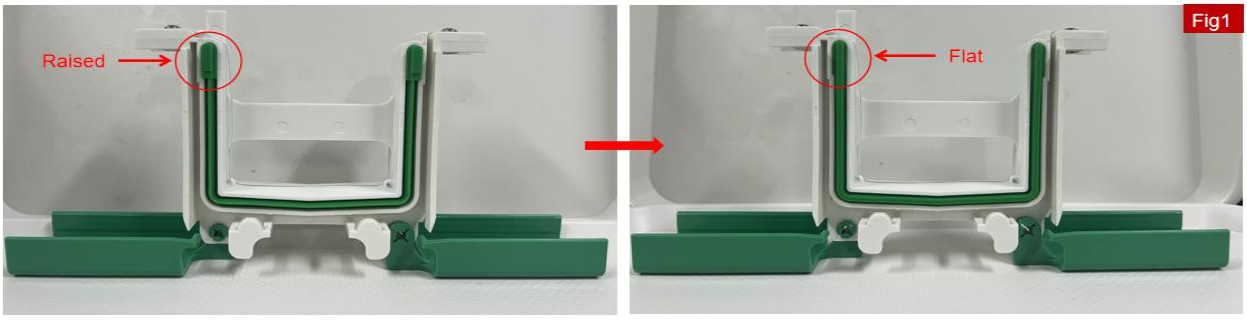
3.Operation Procedure

3.1 Preparation of Electrophoresis Buffer

Completely dissolve one packet of electrophoresis buffer powder in 1 L of deionized water with thorough stirring.

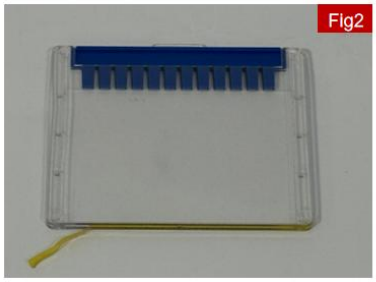
3.2 Electrophoresis Tank Assembly

When using an electrophoresis tank with a prominent silicone gasket, such as those from Bio-Rad or WIX, the green silicone gasket on the inner frame must be reoriented. Remove the gasket and re-insert it into the groove on the inner frame, ensuring that its flat side is facing outward(Figure 1).

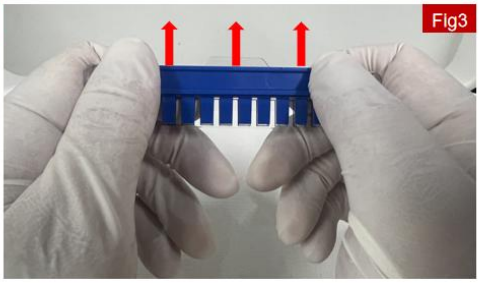


3.3 Precast Gel Preparation

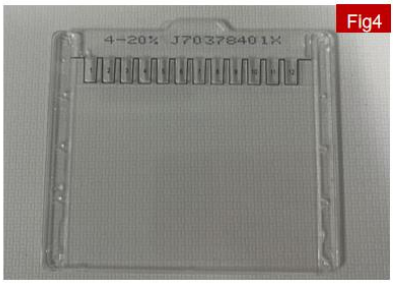
Remove the pre-cast gel from its packaging and detach the gold sealing tape from the bottom of the gel cassette(Figure 2). The comb is then carefully removed by first lifting its left, right, and middle sections slightly to disengage the teeth from the gel, and then steadily pushing it out as illustrated (Figure 3).After removing the comb, make sure the sample loading holes are neat before conducting the sampling (Figure 4).



Peel off the sealing tape at the bottom of the gel cassette



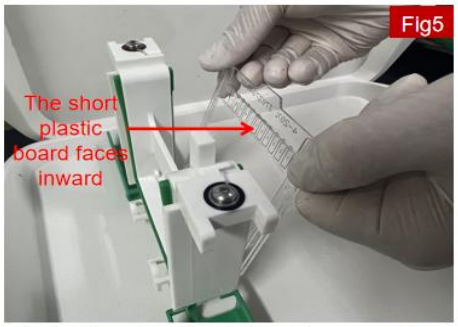
Gently remove the comb from the gel cassette



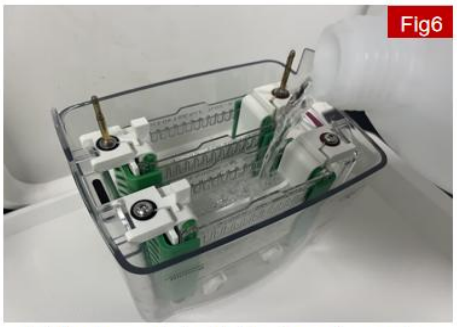
The precast protein gel is ready

3.4 Pre-cast Gel Installation

Seat the prepared pre-cast gel in the electrophoresis apparatus (Figure 5).Completely fill the inner chamber with electrophoresis buffer. For the outer chamber, add buffer to a level slightly below the inner chamber (when using 4 gels) or to the halfway point of the tank (when using 2 gels), taking care not to overfill beyond the cassette (Figure 6). It is recommended to use a syringe to gently flush the wells with 1x electrophoresis buffer to clear them of bubbles and residual storage buffer prior to loading.



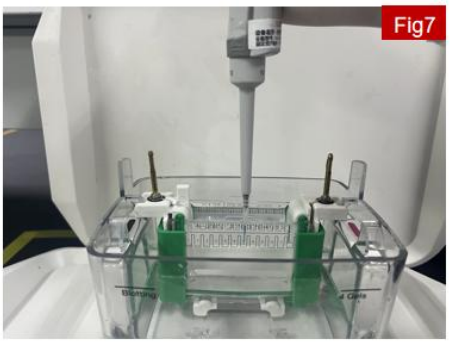
Install the adhesive plate in the core of the electrophoresis tank



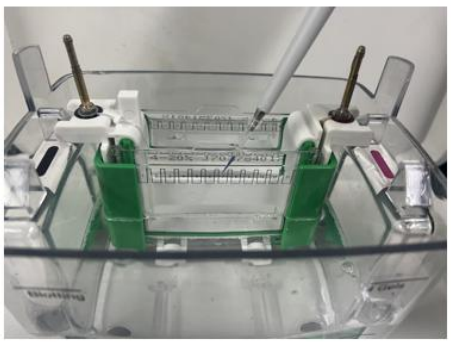
Add to the protein electrophoresis running buffer

3.5 Sample Loading

Load the processed protein samples by vertically inserting a pipette tip into the well and dispensing the liquid (Figure 7).



The correct operation for adding samples



The operation of adding samples incorrectly

3.6 Electrophoresis Run

Following sample loading, secure the lid on the tank and connect it to the power supply (Figure 8). It is recommended to run the gel at 160 V. Do not exceed the maximum voltage of 180 V.

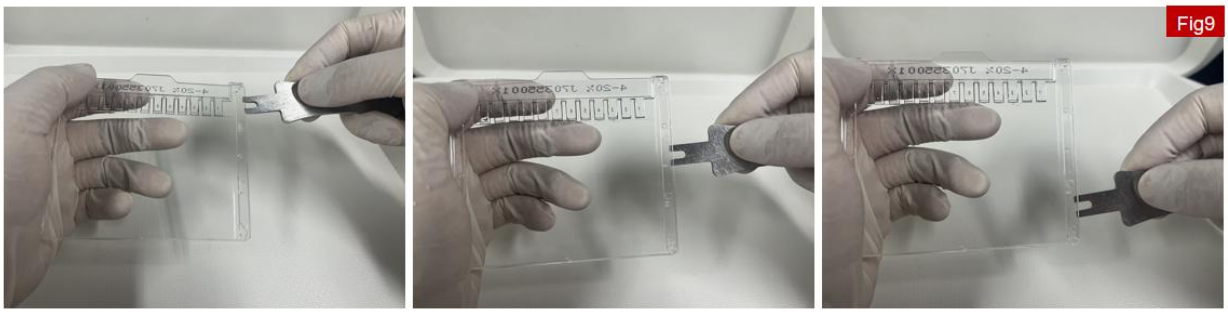
3.7 Remove the gel from the plate:

①Once the electrophoresis is finished, remove the gel plate from the apparatus.

②Open the gel cassette by carefully inserting the opener into the gap between the two plates.

③Wiggle the opener up and down gently and repeat the operations until the two plates are completely separated（Figure 9).

④Upon opening, gel may sit on either side of the cassette. Remove and discard the plate without the gel, and loosen the gel from the other plate with water and gently remove.



Upper middle lower

4.Precations

4.1 The sample must be subjected to high-speed centrifugation prior to loading.

4.2 It is recommended to measure the protein concentration of the sample prior to loading. The total protein amount per well should not exceed 30 μg.

4.3 It is recommended that the salt concentration of the sample should not exceed 100 mM prior to loading.

4.4 After adding Loading buffer, the sample should be heated for 20 minutes to ensure complete protein denaturation.

4.5 It is recommended to treat the E. coli sample with nuclease.

5.Related Products

Product	Cat.No.	Size
FuturePAGE™ HP 4-12% 15 Wells	F15412MGel	10PCs/Box
MES-SDS Running Buffer	BR0002-01	5PKs/Box