GEL-FIX™ Step-by-step instruction for casting horizontal polyacrylamide gels (0.5 mm) using the capillary technique:

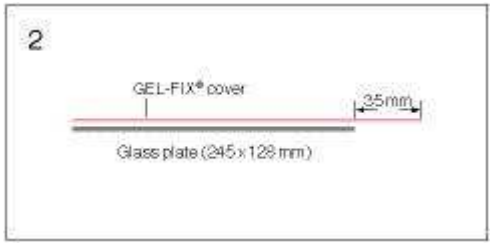
1

Distribute 0.4 ml of water onto the 265 mm long glass plate (Cat. No. 42952). Carefully align the end of a sheet of GEL-FIX™ for PAG (Cat. No. 42993) at one end of the glass plate. Slowly »roll« it towards the other end. Press out excess water with a rubber roller. Take care to eliminate any air bubbles trapped between the glass and the GEL-FIX™ sheet.
Filter paper can be used to blot excess water from the edge of the glass plate. Use only dust-free GEL-FIX™ sheets and rigorously cleaned glass plates.
Lay the 0.5 mm spacer strips (Cat. No. 42901) along the edge of the GEL-FIX™ sheet and press lightly so that the spacer adheres to the GEL-FIX™ sheet.



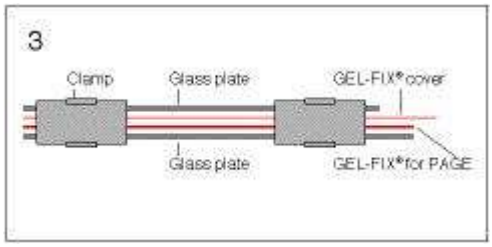
2

Apply the GEL-FIX™ for cover sheet (Cat. No. 42995)onto the 245 mm long glass plate (Cat. No. 42953) using the technique of Step 1.
Note that the cover will extend ca. 35 mm beyond the end of the glass plate. If the GEL-FIX™ cover is not used, the glass plate should be treated with BlueSlick (Cat. No. 42500).



3

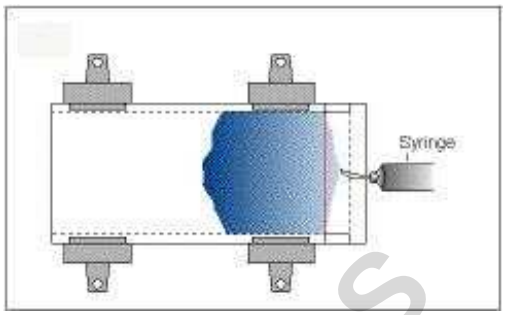
Preparation of cuvette: Place glass plate with GEL-FIX™ for cover sheet (from Step 2) over the GEL-FIX™ for PAG sheet (from Steps 1 & 2).
Take both glass plates together with one hand and with the other hand clamp them together (use clamps, Cat. No. 42921), along the length (2 clamps on each length) such that each clamp is about 1 cm from the margin.



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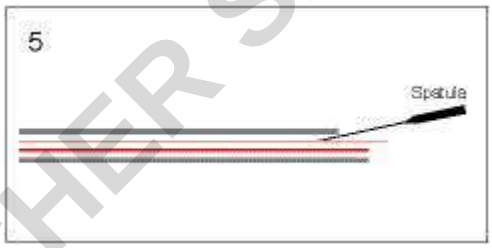
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4



Lay the cuvette (from Step 3) horizontally on a flat surface. Using a syringe fill the space between the GEL-FIX™ for PAG and the GEL-FIX™ for cover with monomer mixture (18 ml).
Utilizing a small piece of tubing on the syringe, slowly inject the solution, applying even pressure on the plunger. The solution will be drawn into the cuvette space via capillary action.

5



After the gel has polymerized (ca. 1 h), the glass plate supports can be separated from the GEL-FIX™ sheets by inserting a thin spatula.
The spacer strips can be removed at this time but the gel itself should be allowed to harden for at least 4 h before use.
The gel can be stored at 4 ℃ for several months and should not be allowed to dry out (store in a sealed plastic bag).

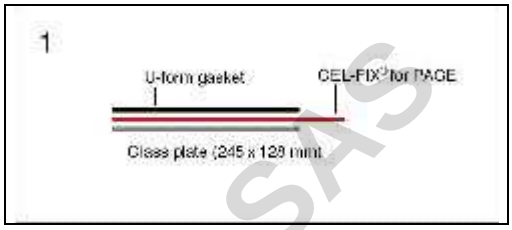
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GEL-FIX™ Step-by-step instruction for casting horizontal polyacrylamide gels (0.5 - 1.0 mm) using the cuvette technique:

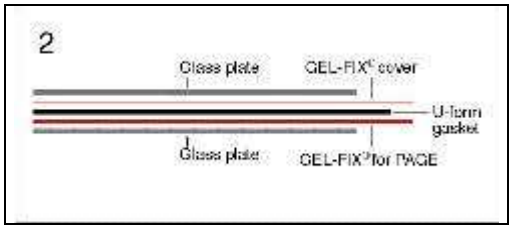
1

Distribute 0.4 ml of water onto the 265 mm long glass plate (Cat. No.42952). Align a sheet of GEL-FIX™ for PAG (Cat. No. 42960) along the long edge of the glass plate.
Roll the sheet slowly to the other end, pressing out any excess water and trapped air bubbles with a rubber roller. To prevent bubble formation, only dust-free GEL-FIX™ sheets and rigorously cleaned glass plates should be used.
Lay the U-form gasket (either 0.5 or 1.0 mm thickness, Cat.No. 42930 or 42929) over the GEL-FIX™ sheet, pressing lightly so that it adheres. The open end of the gasket should be at the edge of the cuvette assembly where the GEL-FIX™ sheet protrudes. Gels of thickness more than 1 mm can beprepared by using 2 U-form gaskets.



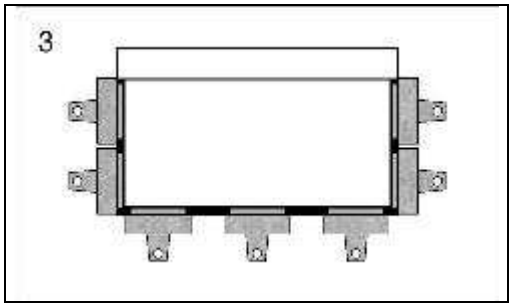
2

Place a GEL-FIX™ for cover sheet (Cat. No. 42957) on a 265 mm long glass plate (Cat. No. 42952) using the technique of Step 1. If a GEL-FIX™ for cover is not used, the glass plate should be treated with BlueSlick (supplied ready-to-use in a spray bottle, propellant-free; cat.no. 42500).
Lay the cover over the GEL-FIX™ sheet with U-gasket.



3

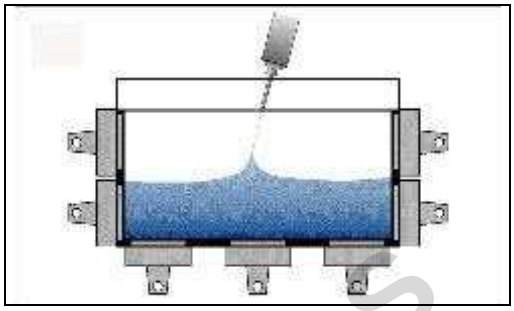
Use 3 clamps (Cat. No. 42921) to seal the bottom edge (without GEL-FIX™ protrusion) and 2 clamps on each of the two sides.
Stand the cuvette upright on a flat surface using the 3 clamps on the bottoms as»legs«.



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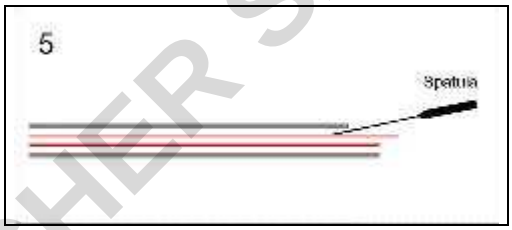
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4



Fill the cuvette with monomer mixture (36 ml) inserting a piece of tubing attached to the syringe between the 2 sheets.
Slowly and evenly push the syringe-plunger to allow the monomer mixture to enter the cuvette.

5



After the gel is polymerized (about 1 h), the cuvette arrangement can be dismantled by removing the clamps and separating the glass plate from the cover with a spatula.
Lift off the cover sheet and carefully remove the U-form gasket. Replace the cover sheet and allow the gel to harden for at least 4 h before use.
The gel can be stored for several months at 4 ℃ if it is not allowed to dry out; storage in a sealed plastic bag is suitable.

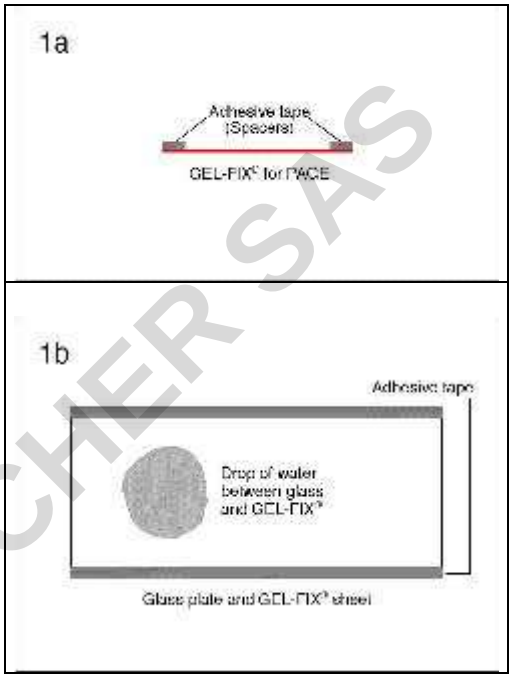
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GEL-FIX™ Step-by-step instruction for casting horizontal ultrathin polyacrylamide gels (0.05 - 0.3 mm) using the flap technique:

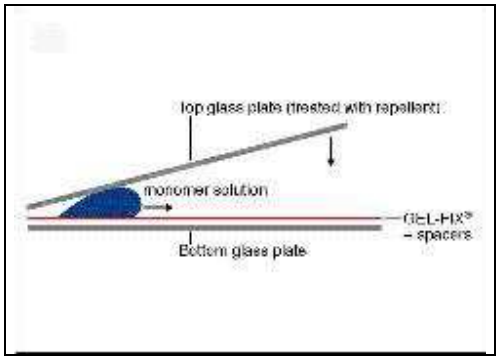
1

Use adhesive tape (cat.no. 42927) as spacers: a layer of tape provides 150 µm thickness. Mount the tape along both edges of the longer sides of the GEL-FIX™ for PAG sheet.
Then, place a drop of water in the middle of a glass plate and place the GEL-FIX™ for PAG sheet on top of the glass plate. Start from one (short) end and roll the sheet slowly towards the other end, so that the water creeps between the glass and the GEL-FIX™. Use a rubber roller (cat.no. 42991) which helps to remove air bubbles and excess water.
Since polymerized acrylamide will adhere strongly to untreated glass it is strongly recommended to treat the second glass plate with a repellent reagent (BlueSlick, supplied ready-to-use in a spray bottle, propellant-free; cat.no. 42500).
Spray evenly on the surface of the glass plate.
Pretreated glass plates will be removed easily after casting is done, without the risk of damage to the thin gel layer.



2

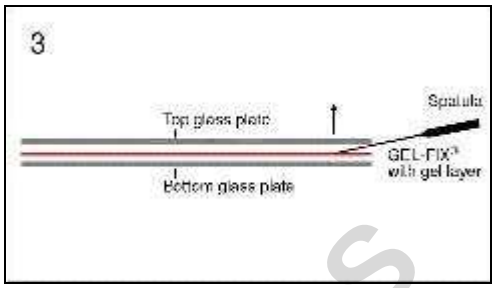
Place the glass plate with the GEL-FIX™ for PAG mounted onto a flat table.
Apply the monomeric acrylamide gel mixture onto the middle of the GEL-FIX™ for PAG sheet and spread it out evenly (about 6 ml solution is needed to cast a gel 245 x 125 x 0.15 mm).
Take the second (top) plate (pretreated) to complete a sandwich.Start with the top plate at one (short) end of the bottom plate.
Slowly lower the top plate, avoiding air bubbles. The acrylamide solution will creep between the top and the bottom plate evenly covering the entire area of the GEL-FIX™ sheet.



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3



Put a small weight on top of the sandwich and let it polymerize for 1 h at room temperature (or better overnight).
To demount the sandwich, remove the top glass plate and cover the surface with a cover sheet (GEL- FIX™ for Covers). GEL-FIX™ for Covers are hydrophilic polyester sheets, 0.075 mm thin, which will protect the polymerized gel sufficiently against drying out but will not stick to the gel. Remove the cover immediately before you start the electrophoresis.
Gels can be stored several weeks at 4 °C without an y detectable loss in performance. Please note that the binding capacity of GEL-FIX™ for PAG is sufficient for gel concentrations up to 10 % T (acrylamide monomer).
GEL-FIX™ polyester sheets are transparent for UV light above 310 nm wavelength.
GEL-FIX™ shelf life time is 24 months if the material is stored dry and dark.

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