The gels are ready for use as packs for HPFH have normal development, are asymptomatic and have results in a continued high percentage of HbF. It is a more benign condition characterized by hypochromia and microcytosis due to the presence of pathologic hemoglobin. The thalassemias are a group of hemoglobin disorders of the body. The individual with homozygous HbCC suffers serious sickling disorders.

In Sickle Cell Syndromes

The major hemoglobin present is HbA with up to 3.5% HbA2. At the end of the first year of life and through adult hood, the normal individual is fetal hemoglobin, HbF. Some of the major sickle cell syndromes are:

- HbS
- HbSC
- HbSβ0thalassemia
- HbSβ+thalassemia
- HbSβthalassemia
- Sickle Cell Disease

This condition shows HbA, HbF and HbC.

This is a heterozygous state showing HbS and HbC.

This condition shows HbA, HbF and HbC.

This is a homozygous state showing almost exclusively HbC.

This condition shows HbA, HbF and HbC.

In Sickle Cell Trait, the normal state of the individual is HbA and HbF and is a normal amount of HbA, on cellulose acetate. In Sickle Cell Trait, the normal state of the individual is HbA and HbF and is a normal amount of HbA, on cellulose acetate.

Sickle Cell Disease is a homozygous state showing HbS and HbC.

Principle

Very small samples of hemolysates prepared from washed, packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system. The hemoglobins in the sample are separated by electrophoresis in a citrate buffer and are stained with Acid Blue 24. The packed cells are automatically applied to the QuickGel Acid Hb Electrophoresis system.
**II. Sample Preparation**

1. Carefully cut open one end of the gel pouch. Remove the gel block inside the magnetic posts. Inspect the gel block for black edges.  
2. Using a QuickGel Blotter C, gently blot the entire gel using a lint-free tissue.
3. Place an Applicator Blade into the instrument.  

**PROCEDURE FOR SNP**

1. Carefully remove the SPIFE QuickGel Holder from the stainer and open the lid.  
2. Remove the SPIFE QuickGel Holder from the stainer and open the lid.  
3. Place one side of the gel backing onto the magnetic posts.  
4. Place the gel block inside the magnetic posts.  
5. Place the gel in the appropriate 方位 of the preplated gel area.  
6. Apply the gel to the appropriate 方位 of the preplated gel area.  
7. Place the gel block into the magnetic posts.  

**III. Gel Preparation**

1. Carefully open one end of the gel pouch.  
2. Place the gel block inside the magnetic posts.  
3. Place one side of the gel backing onto the magnetic posts.  
4. Place the gel block inside the magnetic posts.  
5. Place the gel in the appropriate 方位 of the preplated gel area.  
6. Apply the gel to the appropriate 方位 of the preplated gel area.  
7. Place the gel block into the magnetic posts.  

**IV. Electrophoresis/Staining**

1. Open the chamber lid and place the Cup Tray with samples on the SPIFE 3000/5000. Align the notes in the tray with the grooves of the chamber.  
2. Apply the gel to the appropriate 方位 of the preplated gel area.  
3. Place one side of the gel backing onto the magnetic posts.  
4. Place the gel block inside the magnetic posts.  
5. Place the gel in the appropriate 方位 of the preplated gel area.  
6. Apply the gel to the appropriate 方位 of the preplated gel area.  
7. Place the gel block into the magnetic posts.

**V. Visualization**

1. Turn on the QuickGel chamber to dry the gel for 5 minutes.  
2. Turn on the QuickGel chamber to dry the gel for 15 minutes.  
3. After the gel has dried for 15 minutes, place the gel into the appropriate 方位 of the preplated gel area.  
4. Place the gel block inside the magnetic posts.  
5. Place the gel in the appropriate 方位 of the preplated gel area.  
6. Apply the gel to the appropriate 方位 of the preplated gel area.  
7. Place the gel block into the magnetic posts.
**PROCEDURE FOR SPIFE 2000/3000**

**STEP BY STEP METHOD**

1. Chamber Preparation

   - Remove one QuickGel Applicator Blade from the packaging. Insert the QuickGel Applicator Blades into the designated slots on the Applicator. If using only one blade, it should be placed into the slot containing the small red dots.
   - Open the Chamber Lid and insert a Chamber Cover into the designated slots on the Chamber Base aligning the small red dots on the Applicator with the grooves of the chamber. Close the Chamber Lid.

2. Sample Preparation

   - Place a Sample in the Electric Chamber.
   - Place the Cathode (left) side of the electrophoresis chamber.
   - Place the QuickGel Dispo Sample Cups 1269 (Includes Applicator, Applicator Base, QuickGel Dispo Sample Cups 1269, QuickGel Applicator Weights 1267, QuickGel Applicator Base 1266, and QuickGel Acid Hemoglobin Gel.)
   - Place a Sample in the Electric Chamber.
   - Open the Chamber Lid and place the Cup Tray with samples in the SPIFE 2000/3000. Align the holes in the tray with the cathode.
   - Place the Acid Stainer (Cat. No. 1338) or 3% acetic acid into the Acid Stainer well. Place the Acid Stainer close to the holder. Do not rinse the Acid Stainer well before use. The Acid Stainer must fit over the small pins to secure the gel.

3. Electrophoresis

   - 1. Prepare hemolysates of patient specimens and controls. The Helena AFSC Hemo Control (Cat. No. 5331) is available but not contained in the kit.
   - 2. Place the Cathode (left) side of the electrophoresis chamber.
   - 3. After electrophoresis is complete, open the Chamber Lid and remove the Chamber Cover. Use the Gel Block Remover to remove the gel from the stain.
   - 4. Using a QuickGel Blotter C, gently blot the entire gel using a rocking and swirling technique. If using two Applicator Blades, place the slide on a blotter and blot. The gels are stable for an additional 15 minutes.

4. Staining

   - 1. After the acid stain is applied, gently roll the gel to the right side fitting the right notch to the holder.
   - 2. The Helena AFSC Hemo Control (Cat. No. 5331) is available but not contained in the kit.

5. Destaining

   - 1. The gel should be placed on a blotter and the excess REP Prep. Make sure that no bubbles remain underneath the gel.
   - 2. After application of the samples into cups 11 to 20. Cover the tray until the electrophoresis chamber.

6. Drying

   - 1. The QuickGel Chamber must be plugged into a power supply capable of providing at least 140 Volts. The QuickGel Chamber is compatible, turn off both Chamber and remove.

**LIMITATIONS**

- Some abnormal hemoglobins have similar electrophoretic mobilities and must be differentiated by other methodologies.
- Further testing required:
  - Globin chain analysis (both acid and alkaline) and structural mobilities and must be differentiated by other methodologies.

**NOTE:** The Applicator Blade holder may be used to aid in the identification of the hemoglobins in the unknown samples.

**RESULTS**

- The results of the electrophoretic mobility of bands on the Acid Hemoglobin Gel. The results will be used in conjunction with the clinical findings to aid in the identification of the hemoglobins in the unknown samples.

**Figure:**

- The results of the electrophoretic mobility of bands on the Acid Hemoglobin Gel. The results will be used in conjunction with the clinical findings to aid in the identification of the hemoglobins in the unknown samples.
**PROCEDURE FOR SPIFE 2000/3000**

**I. Chamber Preparation**

**A. Chamber Setup**

1. Carefully open one end of the pouch and remove one gel block from the plastic mold. Hold the gel block facing backwards into the stainer chamber. 

2. Dispense approximately 1 mL of REP Prep onto the cathode (left) side of the electrophoresis chamber. 

3. Place the gel over the REP Prep inside the rectangle of the chamber floor. Hold the gel so that the samples numbered 1 through 5 are facing upwards, numbered 8 and B. 

**B. SPIFE 3000**

1. Load Sample 1 00:30 20°C SPD=4

**C. SPIFE 2000**

1. Load Sample 1 00:30 20°C SPD=4

**IV. Sample Application**

**A. QuickGel Assembly**

1. Carefully cut open one end of the gel pouch. Remove the gel to be used from the plastic mold and discard the remaining gel. 

2. Place a QuickGel Electrode on the outside ledge of each gel block inside the magnetic wells, transparent contact surface facing upwards. 

3. Place the gel into the stain for 4 minutes. Remove the gel and allow it to drain on a blotter. 

4. Place the gel into Destain Solution for 1 minute, using the Gel Block Remover to remove the excess Destain Solution. 

5. Place the gel into Destain Solution for 1 minute or until dry. When drying is complete, turn off the Electrophoresis Unit.

6. Place the gel into the stainer for 4 minutes. Remove the gel and allow it to drain on a blotter.

7. Place the gel into Destain Solution for 1 minute, using the Gel Block Remover to remove the excess Destain Solution. 

8. Place the gel into Destain Solution for 1 minute or until dry. When drying is complete, turn off the Stainer Unit.

9. Store the QuickGel Electrode in a desiccator. 

**B. Standard Hemoglobin Control**

1. Place the gel into the stainer for 4 minutes. Remove the gel and allow it to drain on a blotter.

2. Place the gel into Destain Solution for 1 minute, using the Gel Block Remover to remove the excess Destain Solution. 

3. Place the gel into Destain Solution for 1 minute or until dry. When drying is complete, turn off the Stainer Unit.

4. Place the gel into Destain Solution for 1 minute, using the Gel Block Remover to remove the excess Destain Solution. 

5. Place the gel into Destain Solution for 1 minute or until dry. When drying is complete, turn off the Stainer Unit.

6. Store the gel in a desiccator.

**C. Hemoglobin Reagent**

1. Load Sample 1 00:30 20°C SPD=4

**D. Acidic Hemoglobin**

1. Load Sample 1 00:30 20°C 5% glacial acetic acid

**E. Basic Hemoglobin**

1. Load Sample 1 00:30 20°C 0.85% NaCl

**F. Electrophoresis**

1. Load Sample 1 00:30 150°C SPD=4

**G. Destain**

1. Destain 1 1:00 REC=OFF VALVE=3

**H. Stain**

1. Stain 1 4:00 REC=ON VALVE=4

**I. Dry**

1. Dry 2 5:00 63°C

**J. Store**

1. Store the gel in a desiccator.

**K. Reference**

1. Load Sample 1 00:30 20°C SPD=4

**L. Quality Control**

1. Load Sample 1 00:30 20°C SPD=4

**M. Replicate**

1. Load Sample 1 00:30 20°C SPD=4

**N. Reagent Control**

1. Load Sample 1 00:30 20°C SPD=4

**O. Sample Control**

1. Load Sample 1 00:30 20°C SPD=4
The diluted stain should be a purpose. The reagent is ready for use as purpose.

**Hemoglobinopathies**

The two variant hemoglobins of greatest importance in the U.S., to serious sickling disorders.

This is a homozygous state showing almost exclusively HbC.

**INTERPRETATION OF RESULTS**

The major hemoglobin present is HbA with up to 3.5% HbA adult hemoglobin, HbA, and a small amount of HbA 2.

**REFERENCE VALUES**


**SUMMARY**

- **Principle**: The reagent is composed of sodium dodecyl sulfate (SDS) and sodium dodecyl sulfate (SDS) as a denaturing agent. The reagent is used to separate and identify hemoglobin fragments. The reagent is intended for the separation and identification of hemoglobin fragments.

**SUGGESTIONS**

- Store the reagent in a cool place.
- Prepare the reagent in advance to ensure a smooth workflow.

**ADDITIONAL INFORMATION**

- The reagent is a nucleic acid-based reagent.
- The reagent is intended for research and diagnostic use.

**REFERENCES**

When dissolved as directed, the stain contains agar in citrate buffer with pH 3.8, 200 mg/L of acid blue-2 (CAS 503-11-8). Each gel contains agar in citrate buffer with pH 3.8. The reagent is ready for use as packed.

**INTRODUCTION OF RESULTS**

Most hemoglobin variants cause no discernible clinical symptoms. A few are of interest primarily to research scientists. Many others are responsible for serious clinical conditions, such as sickle cell disease and thalassemia, and divide the abnormalities of hemoglobin synthesis into three groups:

1. **Production of an abnormal protein molecule** (e.g. sickle cell disease)
2. **Signs of Deterioration** (e.g. hereditary persistence of fetal hemoglobin)
3. **Signs of Deficient** (e.g. 3

This condition shows HbA, HbF and HbC.

C-Dele&

C Disease

This is a heterozygous state showing HbA and HbC.

This condition shows HbA and HbF.

This condition shows HbA and HbA.

**Sickle Cell-Thalassemia Disease**

This condition shows HbA, HbF and HbC.

**Thalassemia Major**

This is a homozygous state showing almost exclusively HbC.

**Thalassemia Minor**

This condition shows HbA, HbF and HbC.

This is a heterozygous state showing almost exclusively HbC.

**Sickle Cell Disease**

This condition shows HbA and HbC.

This is a heterozygous state showing mainly HbA.

This condition shows HbA and HbC.

This condition shows HbA and HbS.

This condition shows HbA, HbF and HbS.

This is a heterozygous state showing mainly HbA.

**Hemoglobin Syndromes**

The foregoing warranties are in lieu of all warranties expressed or implied including, but not limited to, the warranties of merchantability, fitness for a particular purpose, and non-infringement. In no case will Helena Laboratories be liable for consequential damages even if advised of the possibility of such damages.

Helena Laboratories warrants its products to meet our published specifications and be free from defects in materials and workmanship. Helena's liability under this warranty is limited to replacement of any product which shall not conform to the applicable specification or be defective. Helena's obligations under this warranty shall cease when it is repaired or replaced.

**REFERENCES**

10. Cat. No. 3419, 3519 Acid Hemoglobin Stain.

**BIBLIOGRAPHY**

The QuickGel Acid Hemoglobin method is intended for the qualitative and quantitative detection of abnormal hemoglobins using agar in acidic buffer on the QuickGel stain. The procedure requires minute quantities of hemolysate to provide results on packed cells are automatically applied to the QuickGel Acid Hemoglobin method.

This method is based on the complex interactions of the hemoglobins, the evaluation must be supplemented by citrate buffer. The QuickGel Acid Hemoglobin method is a simple method that is based on the complex interactions of the hemoglobins. The evaluation must be supplemented by citrate buffer. The QuickGel Acid Hemoglobin method is a simple method that is based on the complex interactions of the hemoglobins. The evaluation must be supplemented by citrate buffer.

**SUMMARY**

The QuickGel Acid Hemoglobin method is intended for the qualitative and quantitative detection of abnormal hemoglobins using agar in acidic buffer on the QuickGel stain. The procedure requires minute quantities of hemolysate to provide results.

**STORAGE AND STABILITY**

The QuickGel Acid Hemoglobin method is intended for the qualitative and quantitative detection of abnormal hemoglobins using agar in acidic buffer on the QuickGel stain. The procedure requires minute quantities of hemolysate to provide results.