

# Full Automation Agarose Gel



*Microgel*

# Gold Standard

# Agarose Gel

## Instrument

- Complete walk-away automation.
- Initial 52 results available within 50 minutes.
- Impressive 208 Serum Proteins samples per 110 minutes throughput.
- Up to 416 samples per batch.
- Temperature controlled Migration chamber.
- High efficiency peltier driven temperature range 10 - 60°C.
- Unique dry migration chamber, 2 or 3 electrodes per gel.
- Up to 2 gels of the same assay can be processed simultaneously.
- Continuously load up to 16 gels; all the same test or a range of different assays processed sequentially.
- Easy result interpretation.
- Report what you see combining visual inspection of the gel and onboard scanning densitometry.
- Minimise immunofixation rates, maximise first line negative tests using gold standard Agarose Gel electrophoresis.
- Disposable Sample Plates.
- Automated data transfer from instrument to PC.

## Software

- Easy data management thanks to innovative Efolab software.
- Automated monoclonal component algorithm allows monoclonal component identification, quantitation and standardized patient follow up.
- Graph overlay function allows direct sample comparison to facilitate patient monitoring.
- Unique Interlab Gel ID allows patient tracking and retrieval of previous reports.
- 3 Level quality Control with Levey-Jennings graphs.
- Pathologic curves database.
- Customise reports; choose from 5 templates or customise further.
- Host connection.
- Special function for veterinary purposes !**

## General Characteristic

- Voltage: 90~260VAC - 50/60 Hz
- Weight: 107 Kg
- Dimension: cm 108x71x67,5
- Connectivity: RS-232



## INTERLAB ASSAYS

- Serum Proteins
- Serum Proteins  $\beta_1$ - $\beta_2$
- Blue Immunofixation
- Violet Immunofixation
- Pentavalent Immunofixation
- Bence-Jones Immunofixation
- H.R. Proteins
- SDS Proteinurie
- Alkaline Hemoglobins
- Acid Hemoglobins
- Lipoproteins
- LDH
- CK
- ALP
- CSF

# Electrophoresis

# Assays....

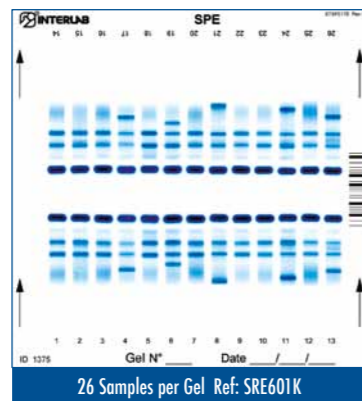
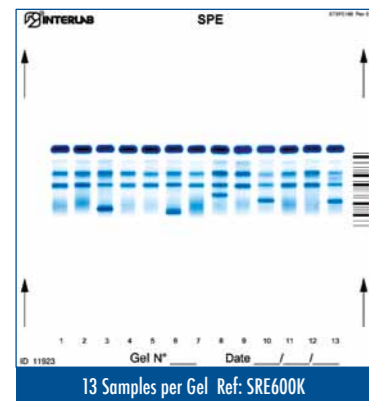
Interlab is the **world leader** in electrophoresis automation and the Microgel is the most fully automated **Agarose Gel** Electrophoresis Analyzer available today. **Using the Gold Standard Electrophoresis technique (Agarose Gel)** Microgel offers a fast, secure and automated agarose gel electrophoresis platform which thanks to a wide range of high clarity Electrophoresis assays will finally deliver automated trouble free Electrophoresis to the laboratory.

# Protein Electrophoresis kit Serum Proteins and Concentrated Urines

The new kits with enhanced formulation for Serum Protein Electrophoresis (SPE) and Concentrated Urines, SRE600K and SRE601K, are intended for the separation of proteins in human serum and concentrated urines by electrophoresis on agarose gel plates. Human serum proteins are separated into five distinct, well-resolved zones or bands, each containing one or more different proteins. The patterns are examined visually for abnormalities and variations in the separated bands or zones. Densitometry of the patterns allows the relative quantification of protein zones.

### Kit content

Gel Plates	10	Acid Blue Stain	1
Blotting Paper	10	Applicator Washing Sol.	1
Buffered Sponges	20/30	Disposable Sample Plates	10



### Reagent Preparation

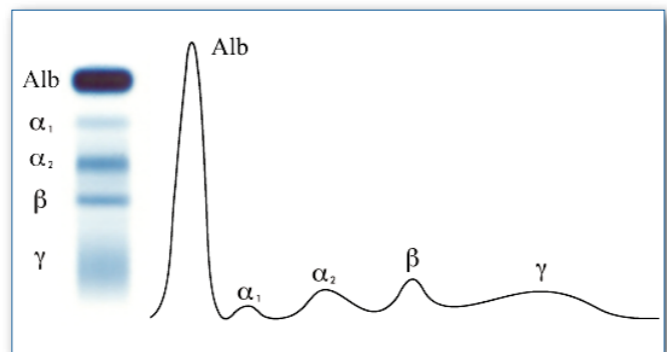
Reagents are ready to use, only the Stain has to be reconstituted with 900 ml of distilled water. All may be stored at room temperature.

### Sample Preparation

Neat serum samples. Concentrated urines to a final total protein concentration  $\geq 20$  g/L.

### Sample Storage & Stability

**Serum:** 1 week at 2 to 8°C  
**Urine:** 1 week at 2 to 8°C, and 1 month at -20°C

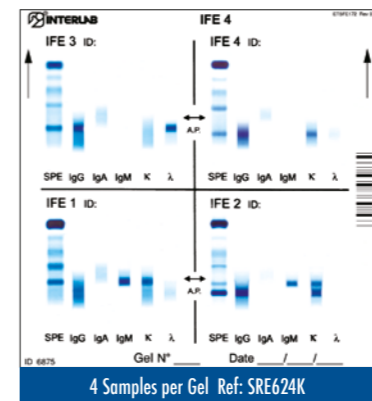
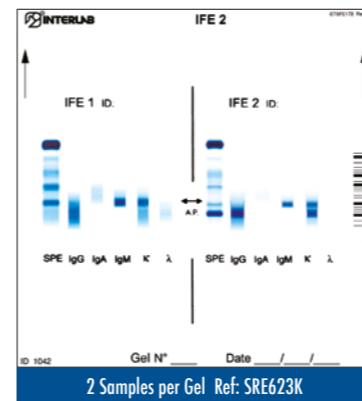


# Serum & Concentrated Urine Immunofixation Acid Blue Stain

The new Immunofixation Electrophoresis (IFE) kits SRE623K and SRE624K are intended to be used for qualitative immunological identification of monoclonal components in human serum and in concentrated urines. No sample dilution is required! Thanks to the Microgel and to the Easy Mask the Immunofixation procedure is extremely fast and user friendly and in just 43 minutes the first two gels, with 2 or 4 IFE results each gel, are completed.

### Kit content

Gel Plates	10	Applicator Washing Solution	1
Blotting Paper A	30	Washing Sol. 1 for Immunofixation	1
Blotting Paper L	10	Washing Sol. 2 for Immunofixation	1
Blotting Paper G	10	Immunofixation Diluent	1
Buffered Sponges	20	Disposable Sample Plates	10
Acid Blue Stain	1		



### Reagent Preparation

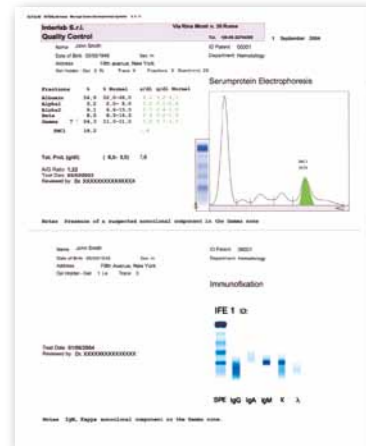
Reagents are ready to use, only the Stain and the Washing Solution for Immunofixation have to be reconstituted: Reconstitute Stain with 900 ml of distilled water; Dilute 20 ml of Washing Solution 1 for Immunofixation plus 20 ml of Washing Solution 2 for Immunofixation to a final volume of 1L with distilled water.

### Sample Storage & Stability

**Serum:** 1 week at 2 to 8°C, and 1 month at -20°C  
**Urine:** 1 week at 2 to 8°C, and 1 month at -20°C

### Sample Preparation

Neat serum samples. Concentrated urines to a final total protein value of about 5 g/L

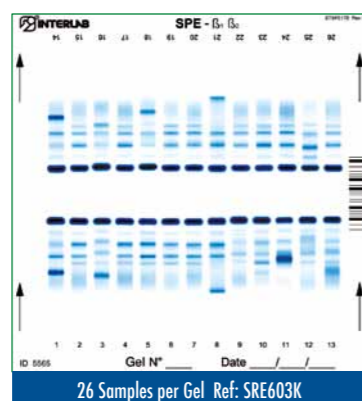
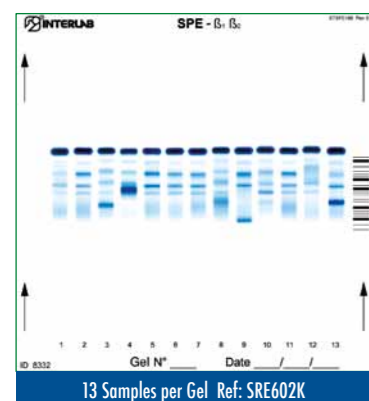


# Protein Electrophoresis kit Serum Proteins $\beta_1$ - $\beta_2$ and Concentrated Urines

The new kits with enhanced formulation for Serum Protein and Concentrated Urine ( $\beta_1$  - $\beta_2$  Electrophoresis (SPE)) SRE602K and SRE603K, are intended for the separation of proteins in human serum and concentrated urines by electrophoresis on agarose gel plates. Human serum proteins are separated into six distinct, well resolved zones or bands, each containing one or more different proteins. The patterns are examined visually for abnormalities, including variations of the bands or appearance of extra bands. Densitometry of the pattern allows the relative quantification of protein zones.

### Kit content

Gel Plates	10	Acid Blue Stain	1
Blotting Paper	10	Applicator Washing Sol.	1
Buffered Sponges	20/30	Disposable Sample Plates	10



### Reagent Preparation

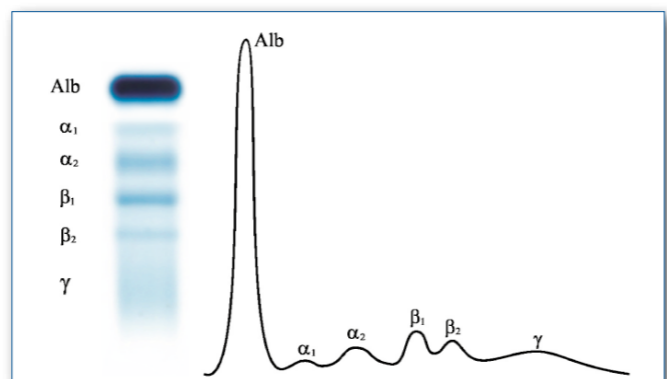
Reagents are ready to use, only the Stain has to be reconstituted with 900 ml of distilled water. All may be stored at room temperature.

### Sample Preparation

Neat serum samples. Concentrated urines to a final total protein concentration  $\geq 20$  g/L.

### Sample Storage & Stability

**Serum:** 3 days at 2 to 8°C  
**Urine:** 1 week at 2 to 8°C, and 1 month at -20°C

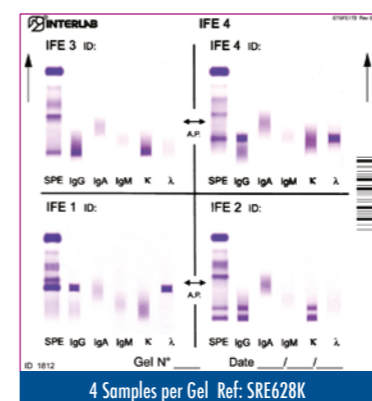
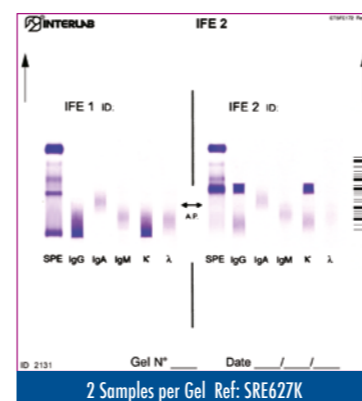


# Serum & Concentrated Urine Immunofixation Acid Violet Stain

The new Immunofixation Electrophoresis (IFE) kits SRE627K and SRE628K are intended to be used for qualitative immunological identification of monoclonal components in human serum and in concentrated urines. The use of high sensitivity staining solution (Acid Violet) and the new enhanced formulation guarantees speed and high sensitivity. Thanks to the Microgel and to the Easy Mask the Immunofixation procedure is extremely fast and user friendly and in just 43 minutes the first two gels, with 2 or 4 IFE results each gel, are completed.

### Kit content

Gel Plates	10	Applicator Washing Solution	1
Blotting Paper A	30	Washing Sol. 1 for Immunofixation	1
Blotting Paper L	10	Washing Sol. 2 for Immunofixation	1
Blotting Paper G	10	Immunofixation Diluent	1
Buffered Sponges	20	Disposable Sample Plates	10
Acid Violet Stain	1		



### Reagent Preparation

Reagents are ready to use, only the Stain and the Washing Solution for Immunofixation have to be reconstituted: Reconstitute Stain with 900 ml of distilled water; Dilute 20 ml of Washing Solution 1 for Immunofixation plus 20 ml of Washing Solution 2 for Immunofixation to a final volume of 1L with distilled water.

### Sample Storage & Stability

**Serum:** 1 week at 2 to 8°C, and 1 month at -20°C  
**Urine:** 1 week at 2 to 8°C, and 1 month at -20°C

### Sample Preparation

Diluted serum sample: IgG lane dilute 1/6 - Other lanes dilute 1/3. Concentrated urines to a final total protein concentration of approx. 5 g/L



# H.R. Proteins Electrophoresis Kit

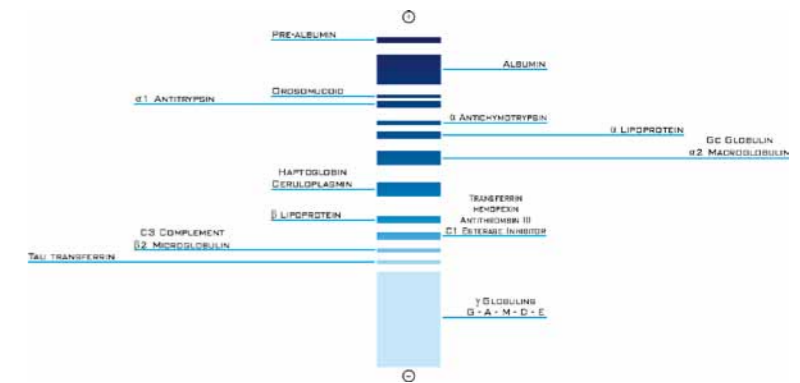
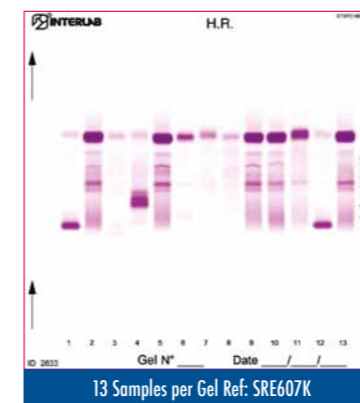
The High Resolution (H. R.) Proteins Electrophoresis kit SRE607K is intended for the separation of proteins in human serum, urine and cerebrospinal fluid (CSF) by electrophoresis on agarose gel plates. Proteins are resolved to give an electrophoretic pattern that is examined visually for the detection of abnormal profiles, including both qualitative variations of the bands and appearance of additional bands. This kit allows to run the electrophoretic analysis using neat urine sample. The unique application method (multiple application) substantially improves the visual inspection and identification of small bands (1.5mg/dl per band).

Kit content			
Gel Plates	10	Acid Violet Stain	1
Blotting Paper	10	Applicator Washing Sol.	1
Buffered Sponges	20	Disposable Sample Plates	10

**Reagent Preparation**  
Reagents are ready to use, only the Stain has to be reconstituted with 900 ml of distilled water. All may be stored at room temperature.

**Sample Preparation**  
Neat urine. Diluted serum 1:20. Concentrated CSF to a final total protein concentration of 10 g/L.

**Sample Storage & Stability**  
**Serum:** 1 week at 2 to 8°C, 1 month at -20°C  
**Urine:** 1 week at 2 to 8°C, and 1 month at -20°C  
**CSF:** 1 week at 2 to 8°C, and 1 month at -20°C



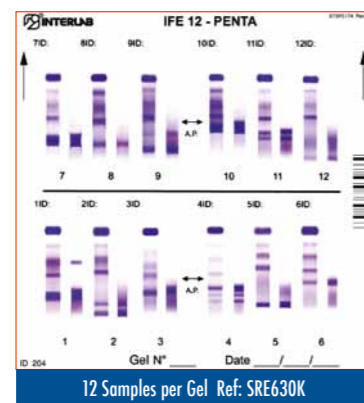
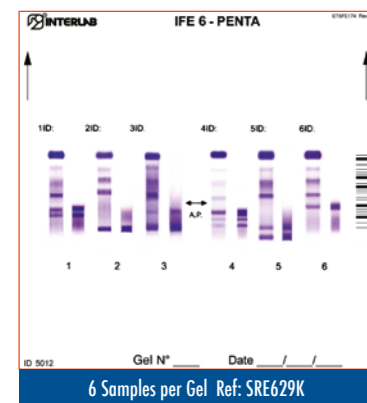
# Serum & Concentrated Urine Pentavalent Immunofixation

The new Immunofixation electrophoresis (IFE) kits SRE629K and SRE630K are intended as a screening assay for monoclonal components in human serum and in concentrated urines. After the migration, serum proteins are immunofixed by a pentavalent antiserum anti-gamma, alpha, mu heavy chain and anti-Kappa and Lambda (free and bound) light chain. Thanks to the Microgel and to the Easy Mask the Immunofixation procedure is extremely fast and user friendly and in just 43 minutes the first two gels, with 6 or 12 IFE results each gel, are completed.

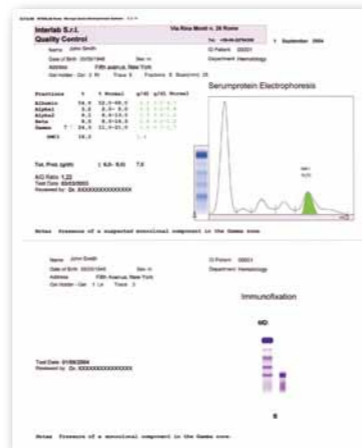
Kit content			
Gel Plates	10	Applicator Washing Solution	1
Blotting Paper A	30	Washing Sol. 1 for Immunofixation	1
Blotting Paper L	10	Washing Sol. 2 for Immunofixation	1
Blotting Paper G	10	Immunofixation Diluent	1
Buffered Sponges	20	Disposable Sample Plates	10
Acid Violet Stain	1		

**Reagent Preparation**  
Reagents are ready to use, only the Stain and the Washing Solution for Immunofixation have to be reconstituted: Reconstitute Stain with 900 ml of distilled water; Dilute 20 ml of Washing Solution 1 for Immunofixation plus 20 ml of Washing Solution 2 for Immunofixation to a final volume of 1L with distilled water.

**Sample Storage & Stability**  
**Serum:** 1 week at 2 to 8°C, and 1 month at -20°C  
**Urine:** 1 week at 2 to 8°C, and 1 month at -20°C



**Sample Preparation**  
Diluted serum sample: Reference lane diluted 1/3 - Pentavalent lane diluted 1/6. Concentrated urines to a final total protein value of about 5 g/L

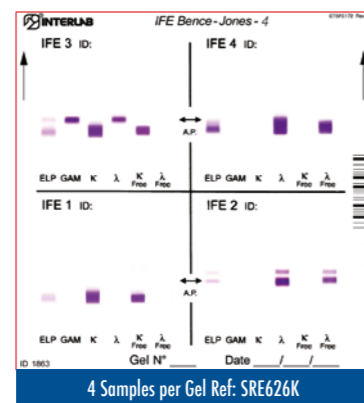
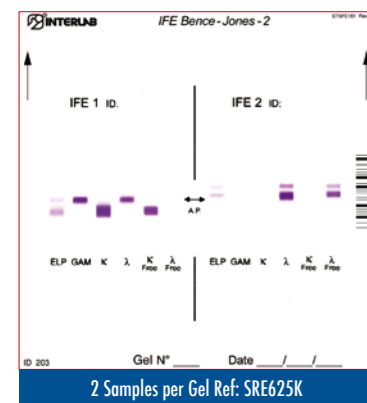


# Bence-Jones Immunofixation

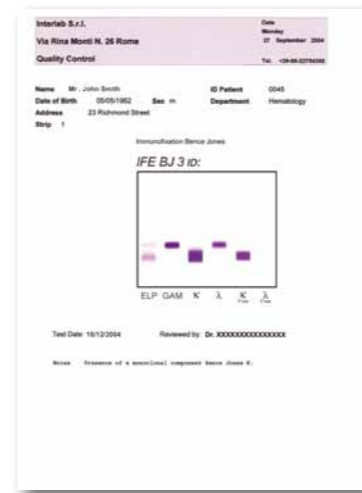
The new Immunofixation electrophoresis (IFE) kits SRE625K and SRE626K are intended to be used for qualitative immunological identification of Bence-Jones proteins and for detection of both normal and abnormal proteins in human neat urines. In fact IFE Bence Jones method combines the resolution of protein fractions by electrophoresis with the specific recognition of free light chains using antibodies raised against heavy chains of human immunoglobulins (IgG, IgM, and IgA) and their light chains, Kappa and Lambda, either bound or free. Thanks to the Microgel and to the Easy Mask the Immunofixation procedure is extremely fast and user friendly and in just 45 minutes the first two gels, with 2 or 4 IFE B.J. results each gel, are completed.

Kit content			
Gel Plates	10	Buffered Sponges	20
Blotting Paper A	30	Acid Violet Stain	1
Blotting Paper L	10	Applicator Washing Solution	1
Blotting Paper G	10	Washing Sol. 1 for Immunofixation	1
		Washing Sol. 2 for Immunofixation	1
		Immunofixation Diluent	1
		Disposable Sample Plates	10

**Sample Storage & Stability**  
**Urine:** 1 week at 2 to 8°C, and 1 month at -20°C



**Reagent Preparation**  
Reagents are ready to use, only the Stain and the Washing Solution for Immunofixation have to be reconstituted: Reconstitute Stain with 900 ml of distilled water; Dilute 20 ml of Washing Solution 1 for Immunofixation plus 20 ml of Washing Solution 2 for Immunofixation to a final volume of 1L with distilled water.



**Sample Preparation**  
Unconcentrated urine.

# SDS Proteinurie Kit

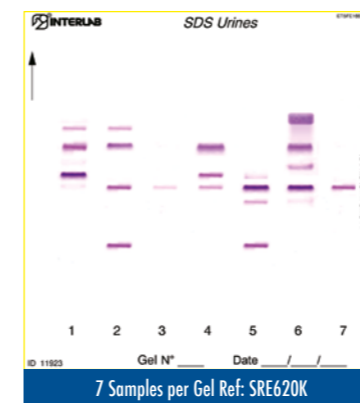
The SDS Proteinurie Kit SRE620K is intended to be used for the qualitative classification of proteinuria in neat urine on SDS agarose gel. The urine proteins electrophoresis on SDS agarose gel separates from the cathode to the anode urine proteins according to their molecular size. The SRE620K Kit uses a special sieving effect agarose, associated to a detergent, the sodium dodecyl sulfate (SDS). The electrophoresis on SDS gels allow to identify glomerular, tubular or mixed diseases and can be a potentially tool in diagnosis of kidney diseases. The bands detected are stained by a very sensitive stain: Acid Violet.

Kit content			
Gel Plates	10	Acid Violet Stain	4
Blotting Paper	10	SDS Diluent	1
Buffered Sponges	20	Template	10

**Reagent Preparation**  
Reagents are ready to use, only the Stain has to be reconstituted with 900 ml of distilled water. All may be stored at room temperature.

**Sample Preparation**  
Neat urine. Dilute 80 µl of urine with 20 µl of diluent.

**Sample Storage & Stability**  
**Urine:** 1 week at 2 to 8°C, 1 month at -20°C



- From the anode to the cathode:**
- Tubular diseases**
    - β2 - microglobulin
    - Lysozyme
    - RBP
  - Free light chains monomer
  - α1 - microprotein
  - Free light chains dimer
  - Albumin- Glomerular diseases**
    - Transferrin
    - IgG
    - IgA
    - Haptoglobin phenotyps
    - IgM & α2-macroglobulins
    - Application point

# Alkaline Hemoglobins Electrophoresis Kit

The Alkaline Hemoglobin Electrophoresis test kit SRE604K is intended for the in vitro diagnostic use for the separation of normal hemoglobins (A1, A2 and F) as well as certain abnormal or variant hemoglobins (S or D and C or E) using agarose gel. To distinguish hemoglobins S from D or C from E an alternate confirmatory test such as acid hemoglobin electrophoresis is necessary. The electrophoretic test is performed at alkaline pH and provides a valuable screening method for hemoglobin patterns. Densitometry of the pattern allows the relative quantification of hemoglobin bands.

### Kit content

Gel Plates	10	Applicator Washing Sol.	1
Blotting Paper	10	Lysing Solution	1
Buffered Sponges	20	Disposable Sample Plates	10
Acid Blue Stain	1		

### Reagent Preparation

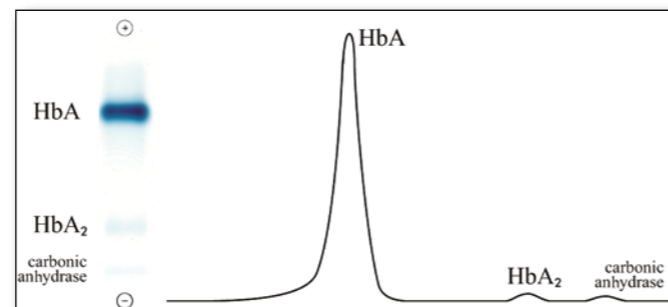
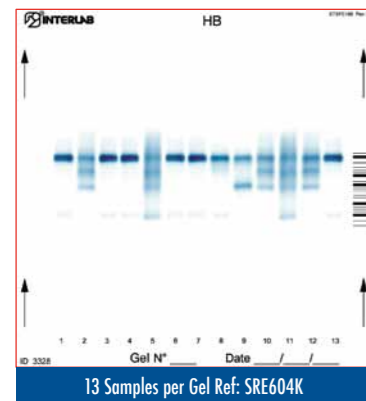
Reagents are ready to use, only the Stain has to be reconstituted with 900 ml of distilled water. All may be stored at room temperature.

### Sample Preparation

After the red blood cells (RBC) are washed, they are lysed as follows: 50 µl of packed washed RBC + 200 µl of lysing solution.

### Sample Storage & Stability

**Whole blood:** 1 week at 2 to 8°C  
**Hemolysate:** 12 hours at 2 to 8°C



# Lipoproteins Electrophoresis Kit

The Lipoproteins Electrophoresis kits SRE606K and SRE621K are intended for the separation of lipoproteins in human serum by electrophoresis on agarose gel plates. Visual inspection of the pattern is performed to detect abnormalities, including variations of the bands or appearance of extra bands. Densitometry of the pattern allows the relative quantitation of lipoprotein zones. The kits have been designed for use with the fully automated instrument Microgel.

### Kit content

Gel Plates	10	Sudan Black Stain	1
Blotting Paper	10	Applicator Washing Sol.	1
Buffered Sponges	20	Disposable Sample Plates	10

### Reagent Preparation

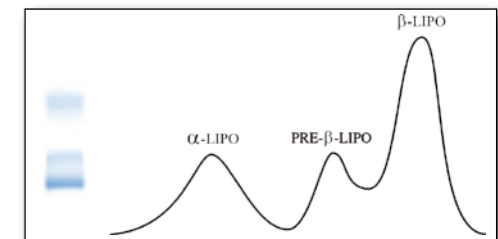
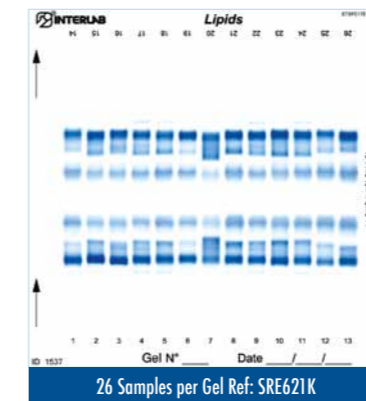
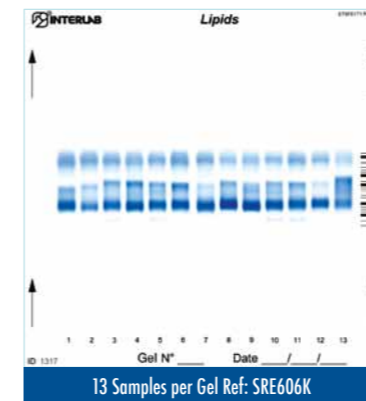
Reagents are ready to use, only the Stain has to be reconstituted by mixing 250ml of ethyl alcohol with 2.5 ml of Sudan Black plus 240 ml of distilled water and 10 ml of normal saline.

### Sample Preparation

Fresh neat serum samples.

### Sample Storage & Stability

**Serum:** 2 days at 2 to 8°C



# Acid Hemoglobins Electrophoresis Kit

The Acid Hemoglobin Electrophoresis kit SRE605K is a qualitative test for the identification of both normal and abnormal or variant hemoglobins, and to confirm the identity of clinically relevant hemoglobins such as A, F, S and C. The Acid Hemoglobin test kit employs agarose gel at acid pH and is for in vitro diagnostic use. The kit has been designed for use with the fully automated instrument Microgel.

### Kit content

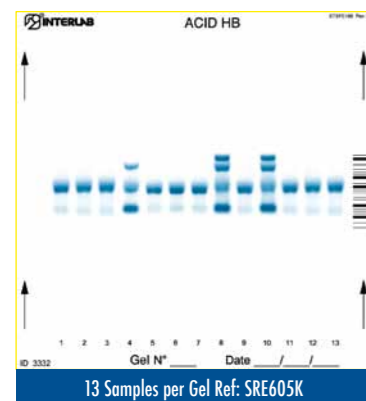
Gel Plates	10	Applicator Washing Sol.	1
Blotting Paper	10	Lysing Solution	1
Buffered Sponges	20	Disposable Sample Plates	10
Acid Blue Stain	1		

### Reagent Preparation

Reagents are ready to use, only the Stain has to be reconstituted with 900 ml of distilled water. All may be stored at room temperature.

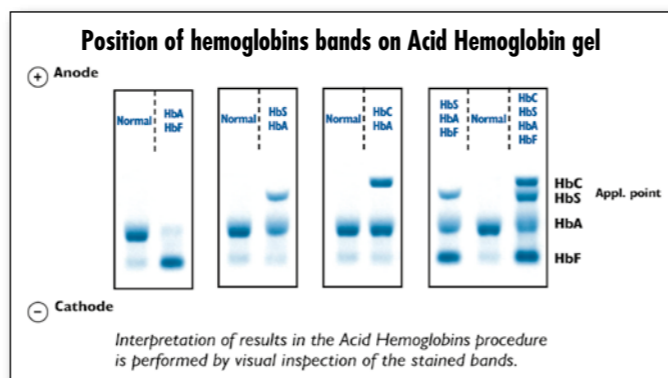
### Sample Storage & Stability

**Whole blood:** 1 week at 2 to 8°C  
**Hemolysate:** 12 hours at 2 to 8°C



### Sample Preparation

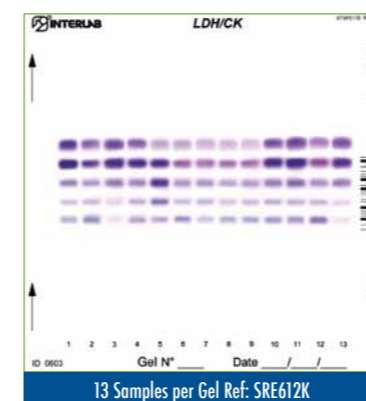
After the red blood cells (RBC) are washed they are lysed as follows: 50 µl of packed washed RBC + 450 µl of lysing solution.



# LDH Isoenzymes Electrophoresis Kit

The LDH isoenzymes kit SRE612K is intended for the qualitative and quantitative determination of the LDH isoenzymes by electrophoresis on agarose gel and specific enzymatic detection. Lactate dehydrogenase (LDH) is present in all human tissues and cells, with the greatest concentrations in liver, heart, skeletal muscle and kidney. Normal serum LDH isoenzyme profiles are the result of normal tissue breakdown.

There are five different LDH isoenzymes that can be detected in serum. In standard LDH isoenzymes electrophoretic patterns five bands are observed, identified according to their electrophoretic mobilities from anode to cathode as LDH 1, LDH 2, LDH 3, LDH 4, and LDH 5. Thanks to the Microgel and to the Easy Mask the LDH procedure is extremely fast and user friendly.



### Kit content

Gel Plates	10
Blotting Paper	10
Buffered Sponges	20
Applicator Washing Sol.	1
Staining Reagent	10
Buffer	2
Disposable Sample Plates	10

### Reagent Preparation

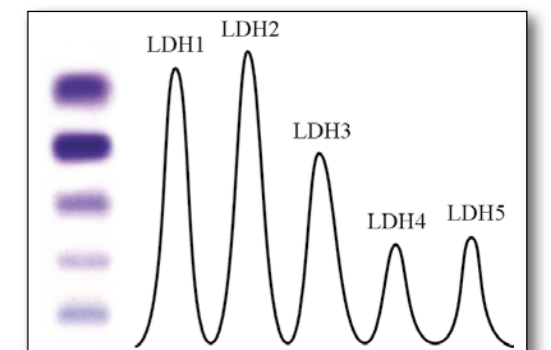
All reagents are ready to use, only the staining reagent must be reconstituted with 1.2 ml of buffer.

### Sample Preparation

Neat serum samples

### Sample Storage & Stability

**Serum:** Fresh serum samples.  
If needed, 2 days at 15 to 30°C or at 2 to 8°C



## CSF Isoelectric Focusing Kit

The Interlab CSF Isoelectric Focusing Kit SRE622K is intended for identifying oligoclonal banding in paired serum and CSF using isoelectric focusing and immunoblotting.

This technique is considered "The Gold Standard" method for the determination of intrathecal IgG synthesis in the clinical diagnosis of multiple sclerosis. In fact, isoelectric focusing is the most sensitive method for the detection of oligoclonal bands in serum and CSF (0.040mg/dl).

The procedure includes isoelectrofocusing on agarose gel using the Microgel instruments and manual immunoblotting steps. Isoelectrofocusing on agarose gel has the purpose to fractionate the proteins in the CSF and serum samples. The immunoblotting steps have the purpose to transfer proteins on the transfer membrane.

This transfer membrane is processed to detect IgG oligoclonal bands and to demonstrate the difference, or lack of, in the distribution of IgG in the CSF and serum of the same patient.

The immunofixation with labeled anti-IgG antiserum permits to detect only the true IgG oligoclonal banding at increased sensitivity of detection so that the analysis can be generally performed on unconcentrated CSF.

The IgG immunofixation patterns of CSF and serum from the same patient are then visually compared.

This allows detection of oligoclonal banding that represents intrathecal synthesis of immunoglobulins. Five different patterns may be seen after the isoelectric focusing (see Fig. below):

**Type 1:** Normal CSF, no band present in the CSF.

**Type 2:** Intrathecal IgG synthesis. CSF with restricted oligoclonal bands not seen in the serum, found in multiple sclerosis.

**Type 3:** Intrathecal IgG synthesis: CSF with restricted oligoclonal bands with additional bands seen in both the CSF and serum. It is found in multiple sclerosis and brain inflammation in systemic disease, for example, sarcoidosis.

**Type 4:** Identical oligoclonal bands in the CSF and serum. Monoclonal bands found in systemic inflammation, for example, Guillain-Barré syndrome.

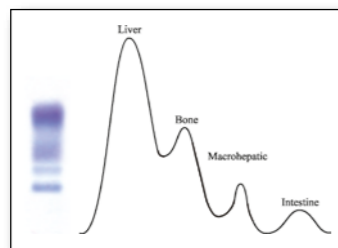
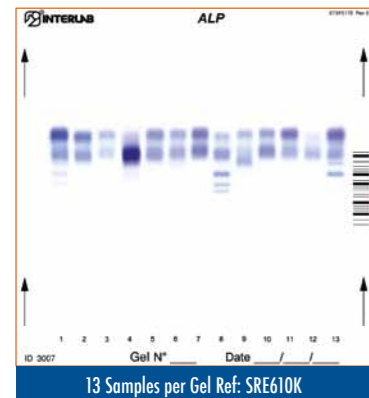
**Type 5:** Monoclonal bands in both the CSF and serum. It is found in myeloma or monoclonal gammopathy of uncertain significance.

## ALP Isoenzymes Electrophoresis Kit

The ALP electrophoresis kit SRE610K is intended to be used for the qualitative and quantitative identification of the Alkaline Phosphatase isoenzymes in human serum by agarose electrophoresis. Alkaline Phosphatase is an enzyme found in all tissues. Tissues with particularly high concentrations of ALP include the liver, bile ducts, placenta and bone. Damaged or diseased tissue releases enzymes into the blood, so serum ALP measurements can be abnormal in many conditions, including bone disease. To differentiate the location of damaged or diseased tissue in the body, ALP isoenzyme testing must be done. Thanks to the Microgel and to the Easy Mask the ALP procedure is extremely fast and user friendly.

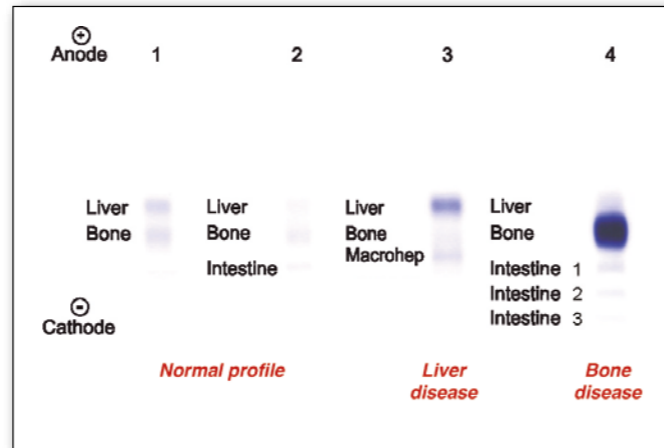
### Kit content

Gel Plates	10	Substrat	2
Blotting Paper	20	NBT	10
Buffered Sponges	20	Neuraminidase	1
Applicator Washing Sol.	1	Disposable Sample Plates	10



### Reagent Preparation

All reagents are ready to use, only the NBT must be reconstituted with 2 ml of Substrat.



### Sample Storage & Stability

**Serum:** Fresh serum samples. If needed, 1 week at 2 to 8 °C

### Sample Preparation

Each sample must be pre-treated with the Neuraminidase. Distribute 5 µl of Neuraminidase in each wells then 25 µl of serum samples. Mix well, wait 5 minutes before starting the analysis.

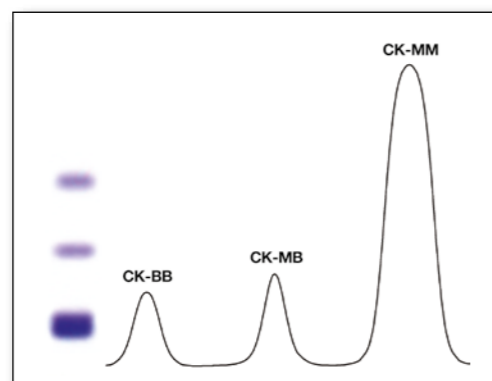
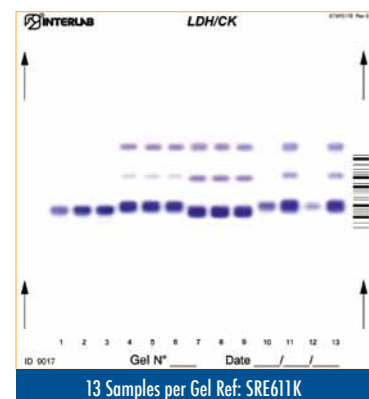
## CK Isoenzymes Electrophoresis Kit

The CK Isoenzymes kit SRE611K is intended to be used for the qualitative and quantitative determination of the CK isoenzymes by electrophoresis on agarose gel and specific enzymatic revelations. The most important use of CK isoenzymes is in the diagnosis of myocardial damage, where CK-MB appears in the serum in about 4-6 hours after myocardial infarction, reaches peak activity at 18-24 hours and can disappear within 72 hours.

Thanks to the Microgel and to the Easy Mask the CK procedure is extremely fast and user friendly.

### Kit content

Gel Plates	10	Applicator Washing Solution	1
Blotting Paper	30	Substrate	10
Blotting Paper G	10	Diluent	2
Buffered Sponges	20	Disposable Sample Plates	10



### Reagent Preparation

Reagents are ready to use, only the substrat reagent has to be reconstituted with 1.6 ml of diluent.

### Sample Preparation

Neat serum samples

### Sample Storage & Stability

**Serum:** Fresh serum samples. If needed: 2 days at 2 to 8 °C, 2 weeks at -20 °C.

### Kit content

Gel Plates	10	Blotting Paper	10
Contact Strips	20	Blotting Paper F	20
Blotting Membranes	20	Blotting paper G	10
Concentrated Acetate Buffer	1	First Antibody	1
Binding Agent	2	Second Antibody	1
Anodic Solution	1	Chromogen	10
Cathodic Solution	1		

### Reagent Preparation

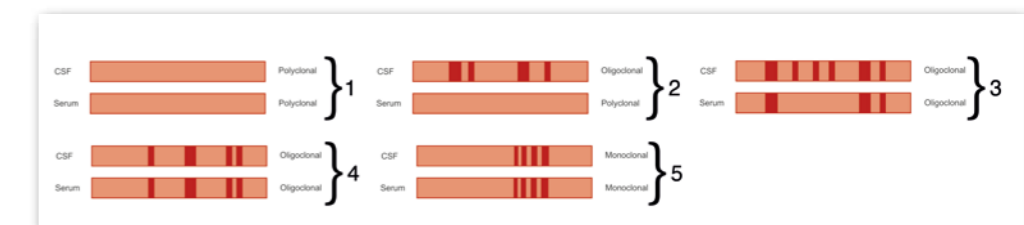
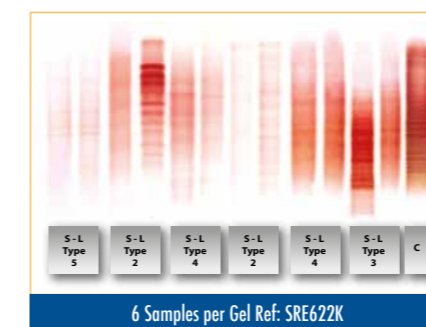
Reagents are ready to use.

### Sample Preparation

Neat CSF samples. The concentration of IgG in the paired serum samples should be adjusted to the same level of the CSF samples using distilled water.

### Sample Storage & Stability

**Serum/CSF:** Fresh serum and CSF samples. If needed: 1 week at 2 to 8 °C, 1 month at -20 °C.



**Type 1:** Normal pattern

**Type 2:** Intrathecal Ig G synthesis (ex: Multiple Sclerosis)

**Type 3:** Intrathecal Ig G synthesis in systemic disease

**Type 4:** Systemic inflammation (mirror pattern with oligoclonal pattern)

**Type 5:** Monoclonal gammopathy (mirror pattern with monoclonal bands)