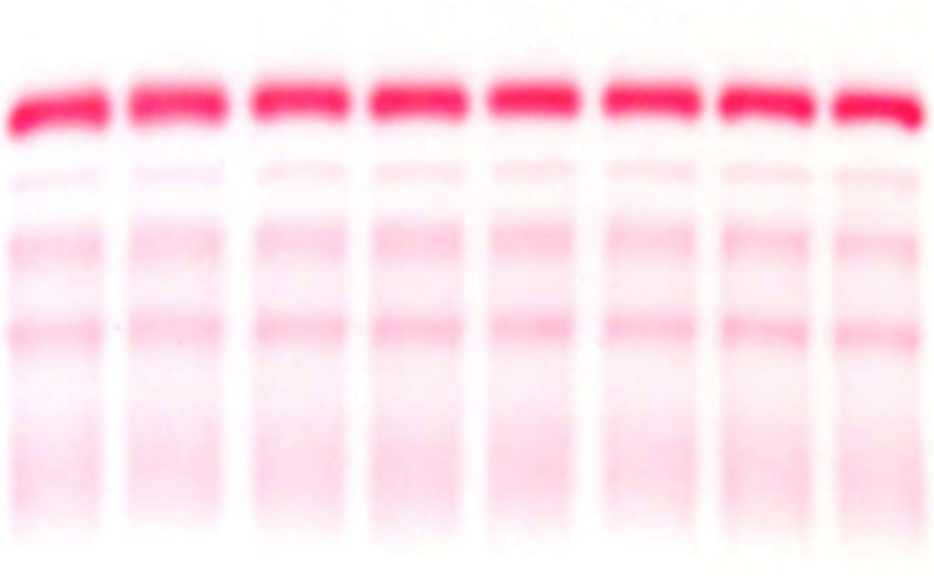
APACOR

Electrophoresis

CELLULOSE ACETATE MEMBRANES & ELECTROPHORESIS SUPPLIES



ELECTROPHORESIS

Cellulose Acetate Membranes

Performance Benefits

- Range of membrane sizes
- Clinical and routine analysis
- All reagents and hardware supplied
- Can be used in all machines
- High sensitivity
- Easy to handle
- Clear resolution
- Reproducible results

Principle

Hb Differentiation

The membrane is supplied in pre-cut dimensions for immediate use in all electrophoresis apparatus.

Apacor supply a comprehensive range of ancillary products including, buffers, reagents and stains which have been optimised for use with Apacor Cellulose Acetate Membranes.

The electrophoretic separation and detection of haemoglobins is a principal application for Apacor Cellulose Acetate Membranes. The membrane provides unrivalled clarity for the diagnosis of haemoglobinopathies including Sickle Cell Diseases and Thalassemia.

Haemoglobinopathies occur when production of normal adult haemoglobin is suppressed and replaced by one or more variants, or normal haemoglobins are produced in abnormal proportions. Screening can highlight these abnormalities before the onset of symptoms, allowing better patient management and counselling.

Electrophoresis exploits the negative charge which haemoglobin will adopt under alkaline conditions; since each haemoglobin variant carries a different net charge, they will all migrate at different speeds. Following electrophoretic migration these fractions are visualised by staining and classified by comparison with known standards.

For more information on haemoglobin electrophoresis using Apacor Cellulose Acetate Membranes, please consult technical document ELC001.

Procedure Overview -

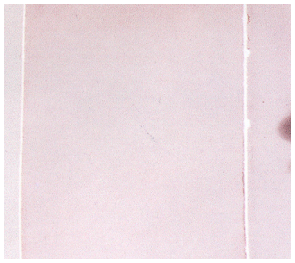
Serum Electrophoresis

Apacor Cellulose Acetate Membranes are indicated for use in the electrophoretic separations of serum proteins.

This process is the single most powerful tool to indicate the wellbeing of a patient, with a large spectrum of diseases indicated by atypical protein migration. Electrophoretic separation exploits the speed of migration as determined by the protein charge. Atypical protein bands indicate clinical significance.

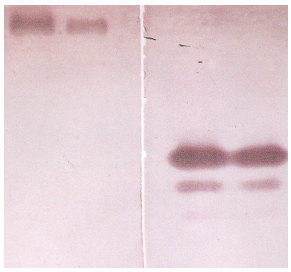
Please consult technical document ELC002.

STEP 1 - SAMPLE APPLICATION



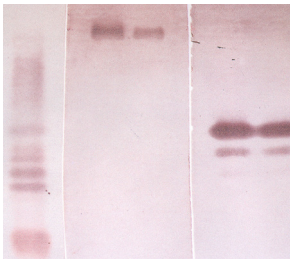
Allow the membrane to soak fully using Apacor High Resolution Buffer II. Dry with absorbent pads and then place the applicator block onto the membrane. Load a 25µl sample in a 15 second application.

STEP 2 - ELECTROPHORESIS



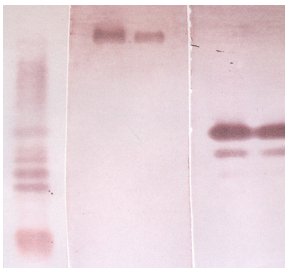
Ensure that the electrophoresis chamber is filled with High Resolution Buffer II and that the polarity of the chamber is correct. Electrophorese for 20 minutes at 2-10 milliamps.

STEP 3 - STAINING



Remove the membrane from the electrophoresis chamber and transfer to vessel containing Ponceau S Solution. Remove the excess with 5% acetic acid solution. Place the membrane in clearing solution. The membrane will clear, giving high resolution banding.

STEP 4 - EXAMINATION



Migrations patterns should be compared to a known control. For quantitative determination, use densitometry or elute separated fractions. When using Ponceau S Solution, the densitometric scan should be undertaken at 525mn.

The procedure is illustrated here, but for more details please consult technical document ELC001/ELC002

High Resolution Buffer II

Product No: 51106

Product Overview

High Resolution Buffer II is a general-purpose electrophoresis buffer intended for use in the qualitative and quantitative separation of proteins. Routine applications include serum proteins, lipoproteins, LDH, CK and alkaline phosphatase isozyme electrophoresis, and immunoelectrophoresis. (This product should not be used to conduct haemoglobin electrophoresis. See 51126.)

Haemoglobin Buffer

Product No: 51126

Product Overview

Haemoglobin Buffer is used in the procedure for the electrophoretic separation, detection, and quantitation of haemoglobins on cellulose membranes.

Ponceau S Solution

Product No: 51284

Product Overview

Ponceau S Solution is intended as a stain for haemoglobin, glycosylated haemoglobins, serum and other proteins following electrophoretic migration.

Absorbent Paper

Product No: 82600

Product Overview

Apacor supply a range of absorbent papers, which are used to blot the sample before media application. The papers are made from a special non-leaching high absorbency material, which allows fast preparation of the electrophoresis media.

References

1. Chin HP, Cellulose acetate electrophoresis - techniques and applications, Ann Arbor Science Publisher, Michigan, 1970
2. Cawley LP, electrophoresis and immunoelectrophoresis, Little, Brown and Co. Boston, Massachusetts. Kohn J , Clin Chem Acta, 2, 297, (1973)
3. Kohn J . Cellulose acetate electrophoresis and immunodiffusion techniques, Smith I, chromatographic and electrophoretic techniques, Vol II, International Publishers, NY,pp 56-78 (1960)

Ordering Information

PRODUCT	PACK SIZE	CODE
MEMBRANES		
Cellulose Acetate Membrane	2.5 X 15.2cm/100 Pack	82000
Cellulose Acetate Membrane	5.5 X 14.4cm/50 Pack	82100
Cellulose Acetate Membrane	5.7 X 12.7cm/50 Pack	82200
Cellulose Acetate Membrane	5.7 X 14.4cm/50 Pack	82300
Cellulose Acetate Membrane	5.55 X 14.4cm/50 Pack	82400
Supported Cellulose Acetate Membrane	5.7 X 14.4cm/50 Pack	82500
Cellulose Acetate Membrane	5 X 20cm/50 Pack	82700
SUPPLIES		
High Resolution Buffer II	12 X 18gm	51106
Haemoglobin Buffer	12 X 18gm	51126
Ponceau S Solution	470ml	51284
Absorbent Paper (pack of 50)	7.6 x 15.2cm	82600

Products can be ordered direct from Apacor or from an appointed distributor

Visit our website for all the latest information www.apacor.com or e-mail on: sales@apacor.com

APACOR

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