

CELLAS Clinical

Cellulose acetate electrophoresis is an important technique in clinical diagnostics. The Cleaver Scientific range of cellulose acetate products offers a complete system solution for research and clinical cellulose acetate electrophoresis applications. CellasGEL includes both equipment and consumables to assist in the research and diagnosis of specific disease states.

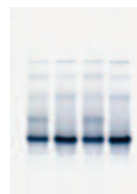
The ideal tank for standard 'dry' membrane and 'wet' gel cellulose acetate techniques, the Cellas electrophoresis system is designed and built to our high quality standard to address both routine clinical and research requirements. Two adjustable supports, which can be positioned anywhere within the tank, readily accommodate different lengths of dry cellulose acetate membrane to a maximum 20cm.



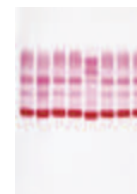
KEY FEATURES

Qualitative identification and quantification of Hb variants. Finding abnormalities of Hb synthesis like sickle cell disorders, thalassaemias etc.

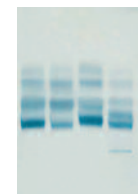
- Compact high resolution system for clinical electrophoresis
- Accommodates strips and gels up to 24x20cm
- Complete range of cellulose acetate gels and kits
- Densitometer software and scanner available



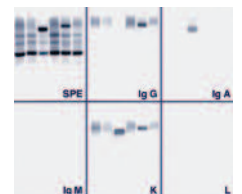
Haemoglobins



Serum proteins



Lipoproteins



IFE

ORDERING INFORMATION, CELLASGEL APPLICATIONS PACKAGES EQUIPPED WITH BRIDGES, APPLICATOR AND CLINICAL TEST KIT

Code	Description	Packages (Kit and Accessories) required, Code	Diagnostic Application
CSLKITCU	CellasKIT: serum and concentrated urine IFE Kit content, sufficient for 5 patients (10x semi-micro tests): 30 CellasGEL strips & TGS buffer; Coomassie stain, clearing & saline solutions; volumetric distributors & antisera (anti-IgG, IgA, IgM, Ig & Ig); blotting paper & mylar film. Excludes: Destain.	CSLKITCU-ABS Includes: 1x CSLKITCU, 1x CSLAPPS22, 3x CSLBDG8.5S	MGUS, MM
CSLKITI2432	CellasKIT: serum IFE Kit content, sufficient for 24 patients (semi-micro) & 32 (micro): 24 CellasGEL strips & Tris-Hippurate buffer; Amidoblack stain, saline & clearing solutions; volumetric distributors & antisera (anti-IgG, IgA, IgM, Ig & Ig); blotting paper & mylar film. Excludes: Destain	CSLKITI2432-ABS Includes: 1x CSLKITI2432, 1x CSLAPPS6, 6x BCSLDG8.5S CSLKITI2432-ABM Includes: 1x CSLKITI2432, 1x CSLAPP8M 6x CSLBDG8.5S	MGUS, MM
CSLKITSP100200	CellasKIT: serum proteins Kit content, sufficient for 100x semi-micro or 200x micro tests: 25 CellasGEL strips & Tris-Hippurate buffer; Ponceau S stain, destain & clearing solutions; blotting paper & mylar film	CSLKITSP-ABS Includes: 1x CSLKITSP100200 1x CSLAPPS4, 3x CSLBDG8.5S CSLKITSP-ABM Includes: 1x CSLKITSP100200 1x CSLAPP8M, 3x CSLBDG8.5S	Dysproteinaemia; Albumin, Alpha-1, Alpha-2, Transferrin, C3 & Gamma Globulin Quantitation
CSLKITSP150200	CellasKIT: serum proteins (high resolution) Kit content, sufficient for 150x semi-micro or 200x micro tests: 25 CellasGEL strips & TGS buffer; Coomassie stain, citric acid & clearing solutions; blotting paper & mylar film. Excludes: Destain	CSLKITSPHR-ABS Includes: 1x CSLKITSP150200 1x CSLAPPS4, 3x CSLBDG8.5S CSLKITSPHR-ABM Includes: 1x CSLKITSP150200 1x CSLAPP8M, 3x CSLBDG8.5S	Incipient Gammopathies
CSLKITHG100	CellasKIT: haemoglobin Kit content, sufficient for 100x semi-micro tests: 25 CellasGEL strips & Tris-Glycine buffer; Ponceau S stain, destain & clearing solutions; blotting paper & mylar film.	CSLKITHG100-ABS Includes: 1x CSLKITHG100, 1x CSLAPPS4 3x CSLBDG8.5S	Haemo- globinopathies
CSLKITLP100	CellasKIT: lipoproteins Kit content, sufficient for 100x semi-micro tests: 25 Cellogel strips & Tris-Hippurate buffer; Sudan Black stain & clearing solution; blotting paper & mylar film	CSLKITLP100-ABS Includes: 1x CSLKITLP100 1x CSLAPPS4 3x CSLBDG8.5S	Hyper-lipidaemias

CellasGEL 'wet' gels

CellasGEL 'wet' cellulose acetate gel strips are ready to use and overcome many of limitations of traditional 'dry' cellulose acetate membranes. CellasGEL's advantages over dry cellulose acetate membranes are as follows:

1. Wet state – unlike dry membranes, CellasGEL is a cellulose acetate film produced in a wet form to facilitate buffer adsorption, but without the entrapment of air bubbles that inhibit electrophoresis

2. Greater thickness – CellasGEL's greater thickness (190- 500µm) compared to dry membranes (160-190µm) allows application of larger sample volumes to enhance detection of poor quality specimens low in protein content

3. High resolution – samples may be applied to CellasGEL as wider but finer bands, without risk of diffusion, to make band quantitation more reproducible; this is further enhanced by extended migration distances (60-70mm) that improve band separation

4. Amphiphilic – CellasGEL's lipophilic and hydrophilic properties make it the perfect separation medium for many different biological molecules, ranging from lipoproteins to haemoglobins. CellasGEL is supplied either as individual packs of 25 or 100 strips or within clinical test kits.

ORDERING INFORMATION

CSLGEL2.514250	2.5x14 CellasGEL 250 micron 100/pack	CSLGEL5.714250	5.7x14 CellasGEL 250 micron, 25/pack				
CSLGEL2.514200	2.5x14 CellasGEL 200 micron 100/pack	CSLGEL5.714190	5.7x14 CellasGEL 190, high resolution, 25/pack				
CSLGEL2.514190	2.5x14 CellasGEL 190, high resolution, 100/pack	CSLGEL2.517200	2.5x17 CellasGEL 200 micron, 25/pack				
CSLGEL5.714500	5.7x14 CellasGEL 500, high volume, 25/pack						
Part Number	Description	Volume applied / sample band width	Compatible Strip Size	Part Number	Description	Volume applied / sample band width	Compatible Strip Size
CSLAPPS22	1x 2-specimen semi-micro applicator	0.7µl / 7mm	2.5x14cm	CSLAPPS6	1x 6-specimen semi-micro applicator	0.7µl / 7mm	5.7x14cm
CSLAPPS4SP	1x 4-specimen semi-micro applicator	0.9µl / 9mm	5.7x14cm	CSLAPPM8	1x 8-sample micro applicator	0.3µl / 5mm	5.7x14cm
CSLAPPS4	1x 4-specimen semi-micro applicator	1.2µl / 9mm	5.7x14cm				

CellasGEL WET MEMBRANE BRIDGES AND DENSITOMETER

CSLBDG8.5S	1x 8.5cm bridge for 1x 5.7x14cm or 2x 2.5x14cm CellasGEL strips
CSLDENS	TurboScan Software Densitometer (excludes computer and scanner)
CSLSCAN	Flatbed scanner for TurboScan software

CellasMEM 'dry' membranes

Although CellasGEL cellulose acetate gels have a number of advantages over traditional dry cellulose acetate membranes, many manual systems and modern robotic platforms still use dry cellulose acetate membranes, which are usually supported on a plastic backing.

Consequently, CellasMEM, a range of dry cellulose acetate membranes supported on a Mylar film has been developed to address this demand.

Package deals provide a quick and convenient solution for those users wishing to perform the more popular Helena-type applications. The most

basic kit includes 25x76 and 60x76mm CellasMEM membranes, 8-sample micro applicator, and paper wicks, while the complete version also contains a Cella tank and new NANO500 power supply. Each CellasMEM dry cellulose acetate membrane is available in 25x76mm (MEM257650), 60x76mm (MEM607625) and 94x76mm (MEM947625) plate sizes, and is compatible with the manual and automated platforms of many leading and emerging brands within the clinical electrophoresis market, including: Helena Laboratories, Interlab and Seleo.

CellasMEM is supplied either as individual packs of 25 or 50 strips to perform manual assays for Serum Protein (Dysproteinaemia; Incipient Gammopathies) and Haemoglobin Analyses (Haemoglobinopathies such as Thalassaemias and Sickle Cell Disorders).

ORDERING INFORMATION

CellasMEM DRY MEMBRANE APPLICATORS				CellasMEM PACKAGE DEALS			
CSLMEMAPP8	CellasMEM 8-sample micro applicator			CSLMEMHKIT	CellasMEM Helena-Type Kit, includes 25x76mm (MEM257650) & 60x76mm (MEM607625) membranes; MEMAPP8 8-sample micro applicator & MEMWICKH 220x40mm paper wicks		
CSLMEMAPPS6	CellasMEM 6-sample semi-micro applicator			CSLMEMHCOMP	CellasMEM Helena-Type Workstation, includes MEMHKIT, CELLAS tanks & nanoPAC500 (500V, 400mA, 120W) power supply (page 62)		
PAPER WICKS							
CSLMEMWICK	CellasMEM paper wicks 190x60mm, pack of 100						
CSLMEMWICKH	CellasMEM paper wicks 220x40mm, pack of 100; suitable for Helena-type cellulose applications with -, MEM607625, MEM577625, MEM947625, MEM9413525 membranes						
Code	Size (WxL)	Pack Size	Compatible Manual System / Automated Platform	Code	Size (WxL)	Pack Size	Compatible Manual System / Automated Platform
CellasMEM MANUAL ASSAY MEMBRANE				CellasMEM ASSAY MEMBRANE			
CSLMEM257650	25x76mm	50/pack	Helena Titan 3 system	CSLMEM307625	30x76mm	25/pack	Genio Interlab - small
CSLMEM607625	60x76mm	25/pack	Helena Titan 3 system	CSLMEM607624	60x76mm	24/pack	Genio Interlab - standard
CSLMEM577625	57x76mm	25/pack	Helena Titan 3 system	CSLMEM7662P25	76x62mm, punched	25/pack	Interlab 648 ISO, 648 PC
CSLMEM947625	94x76mm	25/pack	Helena Titan 3 system	CSLMEM7413625	74x136mm	25/pack	SAE - NT
CSLMEM9413525	94x135mm	25/pack	Helena Titan 3 system	CSLMEM7822725	78x227mm	25/pack	SAE 500/600
CSLMEM7660P25	76x60mm, punched	25/pack	SELEO AdaLya 24, Selvet 24, Thera 72, Exprime, Giant	CSLMEM8012525	80x125mm	25/pack	Diafero Standard
				CSLMEM2508025	280x80mm	25/pack	Diafero Extra
				CSLMEM8022525	80x225mm	25/pack	Cliniphor
				CSLMEM762325	76x23mm	25/pack	Saechem
				CSLMEM678930	67x89mm	30/pack	Smart
				CSLMEM7618025	76x180mm	25/pack	Pragma
				CSLMEM7621025	76x210mm	25/pack	Megaphore

Although CellasGEL cellulose acetate gels have a number of advantages over traditional dry cellulose acetate membranes, many manual systems and modern robotic platforms still use dry cellulose acetate membranes, which are usually supported on a plastic backing. Consequently, CellasMEM, a range of dry cellulose acetate membranes supported on a Mylar film has been developed to address this demand.

Each CellasMEM dry cellulose acetate membrane is available in 25x76mm (MEM257650), 60x76mm (MEM607625) and 94x76mm (MEM947625) plate sizes, and is compatible with the manual and automated platforms of many leading and emerging brands within the clinical electrophoresis market, including: Helena Laboratories, Interlab and Seleo. CellasMEM is supplied either as individual packs of 25 or 50 strips to perform manual assays for Serum Protein (Dysproteinaemia; Incipient Gammopathies) and Haemoglobin Analyses (Haemoglobinopathies such as Thalassemias and Sickle Cell Disorders).

Applicators

The CellasMEM MEMAPPM8 is an 8-sample micro applicator designed for use with 60x76mm (MEM607625) and 25x76mm (MEM257650) CellasMEM dry plates. The applicator dispenses each sample deposit as a thin band 5mm wide that is equivalent to 0.25µl in volume; and may load either one 60x76mm strip or two 25x76mm strips (4 samples per strip) at a time. By loading each sample as a tighter, but finer, band over a wider front, the sample diffusion and saturation typical of standard syringe loading methods is significantly reduced, resulting in improved band quantitation. A MEMAPPS6 semi-micro applicator is also available to load 6 samples, each sample deposit 7mm wide and corresponding to 0.5L in volume.

Bridges

Adjustable bridges within the CELLAS tank render specialist bridges unnecessary. Both CELLAS bridges may be positioned either side of the central buffer partition within the tank to produce the 76mm gap necessary to support Helena-type membranes, while the 24cm width of the tank accommodates either three 60x76mm or six 25x76mm CellasMEM membranes per run. A dedicated bridge adaptor (MEMBA) is available for those users of different cellulose acetate electrophoresis tanks that do not have adjustable bridges.

Paper Wicks

Supplied in packs of 100 and available in 190x60mm and 220x40mm (WxL) sizes, CellasMEM disposable paper wicks may be used respectively with standard CellasMEM dry plates and CellasMEM dry plates for Helena applications. To set up the Cellas tank for use with dry plates, simply insert each paper wick lengthwise within the tank pre-filled with buffer, so that the buffer will become absorbed. Once absorbed, fold over the top of each wick to make a support bridge, ensuring the bottom edge of the wick is immersed within buffer and in contact with the bottom of the tank, while the top edge rests along the adjustable bridge. Repeat for the other bridge.

CellasMEM Membranes

CellasMEM membrane plates are available in many different sizes and quantities ranging from the market-leading Helena Titan 3 manual system to punched dry membrane plates compatible with the strip-holders of automated systems from Genio Interlab and SELEO. Also listed are CellasMEM membranes for older systems (some of which are obsolescent) that are still in use today.

CellasMEM Package Deals

Package deals provide a quick and convenient solution for those users wishing to perform the more popular Helena-type applications. The most basic kit includes 25x76 and 60x76mm CellasMEM membranes, 8-sample micro applicator, and paper wicks, while the complete version also contains a Cellas tank and new NANO500 power supply.

ORDERING INFORMATION

CellasMEM DRY MEMBRANE APPLICATORS

CSLMEMAPPM8	CellasMEM 8-sample micro applicator
CSLMEMAPPS6	CellasMEM 6-sample semi-micro applicator

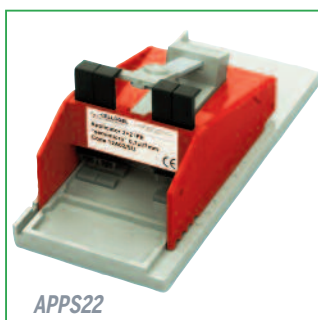
PAPER WICKS

CSLMEMWICK	CellasMEM paper wicks 190x60mm, pack of 100
CSLMEMWICKH	CellasMEM paper wicks 220x40mm, pack of 100; suitable for Helena-type cellulose applications with CSLMEM257650, CSLMEM607625, CSLMEM577625, CSLMEM947625, CSLMEM9413525 membranes

CellasMEM PACKAGE DEALS

CSLMEMHKIT	CellasMEM Helena-Type Kit, includes 25x76mm (CSLMEM257650) & 60x76mm (CSLMEM607625) membranes; CSLMEMAPPM8 8-sample micro applicator & CSLMEMWICKH 220x40mm paper wicks
CSLMEMHCOMP	CellasMEM Helena-Type Workstation, includes CSLMEMHKIT, CELLAS tanks & NANO500 (500V, 400mA, 120W) power supply (page 62)

Code	Size (WxL)	Pack Size	Compatible Manual System / Automated Platform	Code	Size (WxL)	Pack Size	Compatible Manual System / Automated Platform
CellasMEM MANUAL ASSAY MEMBRANE				CellasMEM ASSAY MEMBRANE			
CSLMEM257650	25x76mm	50/pack	Helena Titan 3 system	CSLMEM307625	30x76mm	25/pack	Genio Interlab - small
CSLMEM607625	60x76mm	25/pack	Helena Titan 3 system	CSLMEM607624	60x76mm	24/pack	Genio Interlab - standard
CSLMEM577625	57x76mm	25/pack	Helena Titan 3 system	CSLMEM7662P25	76x62mm, punched	25/pack	Interlab 648 ISO, 648 PC
CSLMEM947625	94x76mm	25/pack	Helena Titan 3 system	CSLMEM7413625	74x136mm	25/pack	SAE - NT
CSLMEM9413525	94x135mm	25/pack	Helena Titan 3 system	CSLMEM7822725	78x227mm	25/pack	SAE 500/600
CSLMEM7660P25	76x60mm, punched	25/pack	SELEO Adalya 24, Selvet 24, Thera 72, Exprime, Giant	CSLMEM8012525	80x125mm	25/pack	Diafero Standard
				CSLMEM2508025	280x80mm	25/pack	Diafero Extra
				CSLMEM8022525	80x225mm	25/pack	Cliniphor
				CSLMEM762325	76x23mm	25/pack	Saechem
				CSLMEM678930	67x89mm	30/pack	Smart
				CSLMEM7618025	76x180mm	25/pack	Pragma
				CSLMEM7621025	76x210mm	25/pack	Megaphore



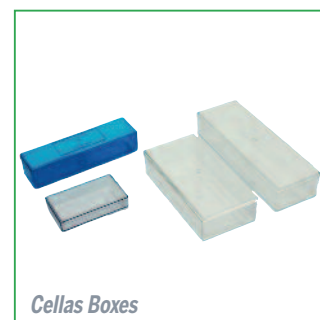
APPS22



APPS4SP



APPSM8



CellaS Boxes



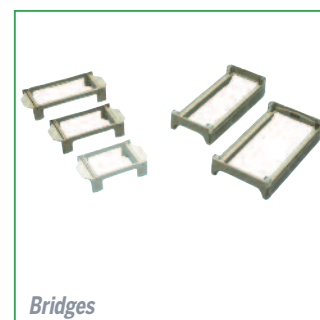
APPS4



APPS6



Paper Wicks



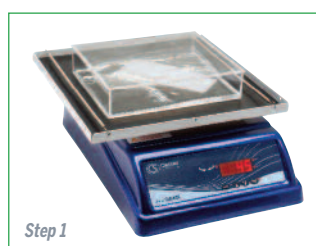
Bridges

Part Number	Description	Volume applied / sample band width	Compatible Strip Size
CSLAPPS22	1x 2-specimen semi-micro applicator	0.7µl / 7mm	2.5x14cm
CSLAPPS4SP	1x 4-specimen semi-micro applicator	0.9µl / 9mm	5.7x14cm
CSLAPPS4	1x 4-specimen semi-micro applicator	1.2µl / 9mm	5.7x14cm

Part Number	Description	Volume applied / sample band width	Compatible Strip Size
CSLAPPS6	1x 6-specimen semi-micro applicator	0.7µl / 7mm	5.7x14cm
CSLAPPM8	1x 8-sample micro applicator	0.3µl / 5mm	5.7x14cm

Using CellaGEL

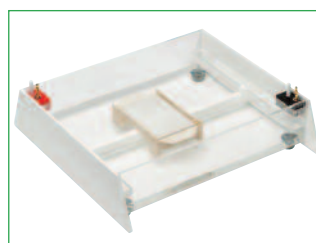
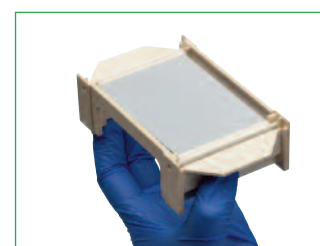
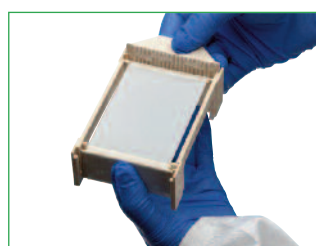
1. Equilibrate a CellaGEL for 10 minutes in Electrophoresis buffer using an agitating platform (e.g. 3D Shaker, page 72)
2. Dry surplus buffer from the CellaGEL before securing it to a Bridge located within a pre-prepared CellaS tank
3. Apply samples to the CellaGEL using the appropriate Applicator, and electrophorese at 200V for 30-9 secs (see Power Supplies, Page 60)
4. Remove the CellaGEL from the tank, and use the required Clinical Test Kit for staining and destaining and clearing
5. Place the CellaGEL on a suitably sized mylar sheet or glass plate and dry in an oven for 10 minutes at 80°C (e.g. NHYBRIDBASIC, page 74)
6. Quantify bands using Scanner and Densitometer Software



Step 1



Step 2



Step 3