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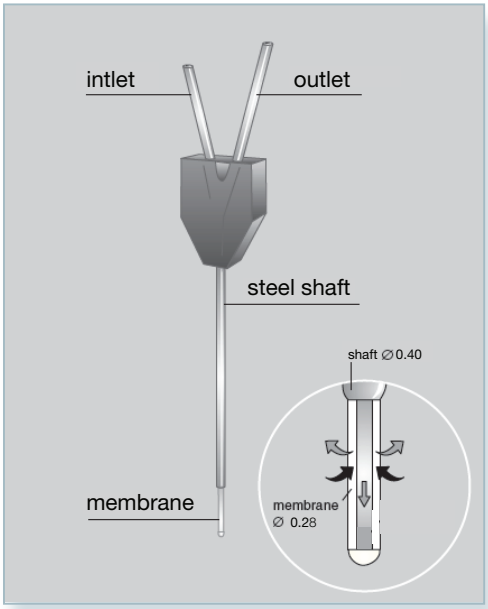
CMA 11 55 kDa & 2MDa Microdialysis Probe User's Manual



TECHNICAL INFORMATION	
Membrane	
Material	Polyethersulfone (PES)
Molecular Cut-Off	500kDa, 2MDa
Outer Diameter	0.28 mm
Length	1, 2, 3 and 4 mm
Probe Shaft	
Material	Stainless-steel
Diameter	0.40 mm
Length	14 mm
Internal Volume	
Inlet Volume	0.1 µL
Outlet Volume	1 µL

Note: The 500 kDa and 2 MDa Cut Off membrane has to be use in a Push-Pull system to avoid loss of fluid out to the surrounding tissue (ultra-filtration). Here the use of a CMA syringe pump and REGLO ICC Pump is recommended.

Instructions for CMA 11 500 kDa & 2MDa Microdialysis Probes	
1.	Fill a microsyringe with perfusion fluid and mount it in the CMA Syringe Pump. The Perfusion Fluid must be clean, at room temperature and preferably degassed.
2.	Run the pump to make sure that liquid leaves the tip of the syringe cannula.
3.	Load the peristaltic pump with the "FEP Tubing Connector Peristaltic Kit". Adjust the lengths of the FEP tubing if needed for a lower dead volume; recalculate the outlet volume if needed (1.2 µl/100 mm length)
4.	Place the inlet end of the "FEP Tubing Connector Peristaltic Kit" in a beaker with Perfusion Fluid and flush the pump to fill all tubing with perfusion fluid. Make sure there is no air bubbles in the complete tubing set.
5.	Set the pump to the required perfusion flow, usually 1 – 5 µL/min.
6.	Prepare a desired length of tubing with a Tubing Adapter on both ends and connect the tubing to the inlet of the probe. Remove the protection tube from the probe carefully. Short cannula = inlet, long cannula = outlet. Tubing Adapters and FEP tubing should be used for all connections. T**o facilitate the handling of Tubing Adapters, they should be soaked in Ethanol 70% for minimum 10 minutes.**
7.	Mount the probe in a Probe/Guide Clip on the CMA 130 In Vitro Stand. Put the probe membrane into a vial filled with perfusion fluid. Connect the inlet tubing of the probe to the syringe cannula by sliding the Tubing Adapter over the cannula.
8.	Flush the probe with perfusion fluid at 8-10µL/min for 4-5 min to wash out air. Knock on the shaft of the clip to help the air to flush away. At this process the Ultra High Cut Off membrane will look as leaking but this is due to ultra-filtration of fluid through the membrane.
9.	Set the pump to the required perfusion flow, usually 1 – 5 µL/min. Make sure both pumps have the same flow rate.
10.	Connect the inlet "FEP Tubing Connector Peristaltic Kit" at the peristaltic pump to the outlet of the probe
11.	Lift up the probe from the vial and check that the membrane doesn't ultrafiltrate or dry out; it should look filled out but not sweating. Lower the probe into the vial and control the outlet volume for the complete system.
12.	The system with the probe is now ready for use.
13.	When changing sample vials, remember to consider the internal volume in the system (see TECHNICAL INFORMATION). This causes a delay that must be calculated when using low perfusion rates and short sampling times

ORDER INFORMATION	Ref No.
CMA 11 500 kDa Microdialysis Probe, 1 mm, 3/pkg*	CMA 8012521
CMA 11 500 kDa Microdialysis Probe, 2 mm, 3/pkg*	CMA 8012522
CMA 11 500 kDa Microdialysis Probe, 3 mm, 3/pkg*	CMA 8012523
CMA 11 500 kDa Microdialysis Probe, 4 mm, 3/pkg*	CMA 8012524
CMA 11 2MDa Microdialysis Probe, 1 mm, 3/pkg*	CMA 8012525
CMA 11 2MDa Microdialysis Probe, 2 mm, 3/pkg*	CMA 8012526
CMA 11 2MDa Microdialysis Probe, 3 mm, 3/pkg*	CMA 8012527
CMA 11 2MDa Microdialysis Probe, 4 mm, 3/pkg*	CMA 8012528
CMA 11 Guide Cannula, 3/pkg	CMA 8309017
CMA 11 Guide Cannula, 30/pkg	CMA 8309018
Tubing Adapter, 10/pkg	CMA 3409500
FEP Tubing, 1 m, 1/pkg	CMA 3409501
FEP Tubing, 1 m, 10/pkg	CMA 8409501
FEP Tubing Connector Peristaltic Kit, 3/pkg	CMA 8012518
CMA 11 & 12 Probe Clip	CMA 8309013

*β –Irradiated Probes are available as Custom Probes

OPTIONAL ACCESSORIES	Ref No.
CMA 4004 Syringe Pump	CMA 400400
CMA 402 Microdialysis Pump with Accessory Kit	CMA 8003100
CMA 402 Microdialysis Pump	CMA 8003110
CMA 110 Liquid Switch	CMA 8308200
CMA 130 In-Vitro Stand with CMA 11&12 Clips	CMA 8309104
CMA 142 Microfraction Collector 230V	CMA 8381142
CMA 142 Microfraction Collector 115V	CMA 8381143
CMA 470 Refrigerated Fraction Collector	CMA 8002770
Microsyringe 1 mL	CMA 8309020
Microsyringe 2.5 mL	CMA 8309021
For other probes and microdialysis accessories please call your local CMA Microdialysis dealer.	

WARRANTY

The probes manufactured by CMA Microdialysis are warranted to be free from defects in material and workmanship for a period of two years from the manufacturing date if stored in the original package.
Claims should be forwarded without delay to CMA Microdialysis or to your local distributor.

The CMA 11 Microdialysis Probe is not intended for use in humans. It is only suitable for laboratory research in animals.
CMA Microdialysis only guarantees single usage of CMA 11 Microdialysis Probes

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