Зонды и направляющие

Описание

По вопросам продаж и поддержки обращайтесь:

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CMA 7 Microdialysis Probes

NEW! CMA 7 PROBES FOR BIG MOLECULES!

The CMA 7 Microdialysis Probe is ideal for use in small areas of the brain or spinal cord of small animals. It is especially suitable for studies in transgenic mice.

- Extremely small
- Optimized for CNS use
- Ideal for chronical implantation
- Membrane lengths: 1 or 2 mm
- Membrane diameter: 0.24 mm (6 kDa), 0.26 mm (55 kDa) or 0.28 mm (500 kDa or 2 MDa)
- Available metal free or $\beta\text{-}irradiated$

Item No.	Description
СМАР000082	CMA 7 6 kDa Microdialysis Probe, 1 mm membrane length (pkg. of 3)
СМАР000083	CMA 7 6 kDa Microdialysis Probe, 2 mm membrane length (pkg. of 3)
CMA8010771	CMA 7 6 kDa Metal Free Microdialysis Probe, 1 mm membrane length (pkg. of 3)
CMA8010772	CMA 7 6 kDa Metal Free Microdialysis Probe, 2 mm membrane length (pkg. of 3)
CMA8012411	CMA 7 55 kDa Microdialysis Probe, 1 mm membrane length, pkg. of
CMA8012412	CMA 7 55 kDa Microdialysis Probe, 2 mm membrane length, pkg. of
CMA8012421	CMA 7 500 kDa Microdialysis Probe, 1 mm membrane length, pkg. of 3
CMA8012422	CMA 7 500 kDa Microdialysis Probe, 2 mm membrane length, pkg. of 3
CMA8012423	CMA 7 2 MDa Microdialysis Probe, 1 mm membrane length, pkg. of
CMA8012424	CMA 7 2 MDa Microdialysis Probe, 2 mm membrane length, pkg. of



NEW! CMA 7 PROBES FOR BIG MOLECULES!

The CMA 7 Microdialysis Probe is ideal for use in small areas of the brain or spinal cord of small animals. It is especially suitable for studies in transgenic mice.

The construction and geometry of the CMA 7 6 kDa Microdialysis Probe tip is exactly the same as in the CMA 11. The outer diameter is 0.24 mm and the shaft length is 7 mm.

New CMA 7 microdialysis probes are now available with 55 kDa cut-off and 0.26 mm outer diameter (more details in the Specifications section).

New CMA 7 microdialysis probes for big molecules are also now available with 500 kDa and 2 MDa cut-off, 0.28 mm outer diameter and 14 mm shaft length (more details in the Specifications section).

An extremely small plastic body where the inlet and outlet tubing are directly mounted, makes the probe easy to implant and light for a small animal to carry. A matching small and lightweight guide cannula is available.

Standard part numbers are available for metal free or β -irradiated CMA 7 6 kDa probes.

For metal free or β-irradiated CMA 7 55 kDa, 500kDa and 2MDa probes, please make your request using our and send it to our Technical Support Team (/technical-support/). We will contact you promptly.

CMA 7 Microdialysis Probes are guaranteed for single use.

SPECIFICATIONS



Specifications	CMAP000082	CMAP000083	СМА8010771	CMA8010772	CMA8010681	CMA8010682	CMA8012411	CMA8012412	CMA8012421	CMA8012422	CMA8012423	CMA8012424
Membrane Length	1 mm	2 mm	1 mm	2 mm	1 mm	2 mm	1 mm	2 mm	1 mm	2 mm	1 mm	2 mm
Membrane O D	0.24 mm	0.26 mm	0.26 mm	0.28 mm	0.28 mm	0.28 mm	0.28 mm					
Membrane Material	Cuprophane	Cuprophane	Cuprophane	Cuprophane	Cuprophane	Cuprophane	Polyestersulfone (PES)	Polyestersulfone (PES)	Polyestersulfone (PES)	Polyestersulfone (PES)	Polyestersulfone (PES)	Polyestersulfone (PES)

Specifications	CMAP000082	CMAP000083	CMA8010771	CMA8010772	CMA8010681	CMA8010682	CMA8012411	CMA8012412	CMA8012421	CMA8012422	CMA8012423	CMA8012424
Molecular Weight Cut-off	6 kD	6 kD	55 kD	55 kD	500 kD	500 kD	2 MDa	2 MDa				
Shaft Diameter	0.38 mm	0.38 mm	0.40 mm	0.40 mm	0.40 mm	0.40 mm	0.40 mm	0.40 mm				
Shaft Length Metric	7 mm	7 mm	7 mm	7 mm	7 mm	7 mm	7 mm	7 mm				
Intlet Volume	negligible	negligible	negligible	negligible	negligible							
Outlet Volume	0.3 μL	0.3 µL	0.3 μL	0.3 μL	0.3 µL	0.3 µL	0.3 μL					
200 mm Inlet tubing (blue)	3.5 µL	3.5 µL	3.6 µL	3.6 µL	3.5 µL	3.5 µL	3.5 µL	3.5 µL				
200 mm Outlet tubing (transp.)	3.5 µL	3.5 μL	3.6 µL	3.6 µL	3.5 µL	3.5 µL	3.5 µL	3.5 µL				
Model	Standard	Standard	Metal Free	Metal Free	β-Irradiated	β-Irradiated	Standard	Standard	Standard	Standard	Standard	Standard

CMA 8 Microdialysis Probes

The CMA 8 Microdialysis Probe is ideal for use in small areas of the brain or spinal cord of small animals.

- Extremely small
- Optimized for CNS use
- Ideal for chronic implantation
- 20 kDa and 100 kDa membranes
- Metal-free and β -irradiated options available as custom made probes.

Item No.	Description
CMA8012201	CMA 8 Elite Microdialysis Probe, 1 mm membrane length (pkg. of 3)
CMA8012202	CMA 8 Elite Microdialysis Probe, 2 mm membrane length (pkg. of 3)
CMA8012301	CMA 8 High Cut-Off Microdialysis Probe, 1 mm membrane length (pkg. of 3)
CMA8012302	CMA 8 High Cut-Off Microdialysis Probe, 2 mm membrane length (pkg. of 3)



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The CMA 8 Microdialysis Probe is ideal for use in small areas of the brain or spinal cord of small animals. This would be our first recommendation for studies in transgenic mice.

The probe is small and ligher than the CMA 12 probes allowing the use of 20 kDa and 100 kDa membranes in mice

An extremely small plastic body where the inlet and outlet tubing are directly mounted makes the probe easy to implant and light for a small animal to carry. A matching small and lightweight guide cannula is available.

CMA 8 Microdialysis Probes are guaranteed for single use.

SPECIFICATIONS

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Specifications	CMA8012201	CMA8012202	CMA8012301	CMA8012302
Probe name	CMA 8 Elite Microdialysis probe	CMA 8 Elite Microdialysis probe	CMA 8 High Cut-off Microdialysis probe	CMA 8 High Cut-off Microdialysis probe
Membrane Material, cut-off	PAES, 20kDA	PAES, 20kDA	PES, 100kDA	PES, 100kDA
Membrane Length	1 mm	2 mm	1 mm	2 mm
Membrane Diameter	0.5 mm	0.5 mm	0.5 mm	0.5 mm
Stainless steel shaft diameter	0.4 mm	0.4 mm	0.4 mm	0.4 mm
Shaft length	7 mm	7 mm	7 mm	7 mm
Inlet internal volume	negligible	negligible	negligible	negligible
Outlet internal volume	3 μL	3 μL	3 μL	3 μL

CMA 11 Microdialysis Probes

NEW CMA 11 PROBE FOR BIG MOLECULES!

Ideal for discrete areas in the CNS due to its greater spatial resolution and reduced size. Causes less tissue damage than other probe types.

- Small diameter
- High spatial resolution
- Causes minimal tissue damage
- Low internal volume
- Membrane lengths: 1, 2, 3 or 4 mm
- Membrane diameter: 0.24 mm (6 kDa), 0.26 mm (55 kDa) or 0.28 mm (500 kDa or 2 MDa)
- Available metal free or $\beta\text{-}irradiated$

Item No.	Description
CMA8309581	CMA 11 6 kDa Microdialysis Probe, 1 mm membrane length (pkg. of 3)
CMA8309582	CMA 11 6 kDa Microdialysis Probe, 2 mm membrane length (pkg. of 3)
CMA8309583	CMA 11 6 kDa Microdialysis Probe, 3 mm membrane length (pkg. of 3)
CMA8309584	CMA 11 6 kDa Microdialysis Probe, 4 mm membrane length (pkg. of 3)
CMA8011081	CMA 11 6 kDa Metal Free Microdialysis Probe, 1 mm membrane length (pkg. of 3)
CMA8011082	CMA 11 6 kDa Metal Free Microdialysis Probe, 2 mm membrane length (pkg. of 3)
CMA8011083	CMA 11 6 kDa Metal Free Microdialysis Probe, 3 mm membrane length (pkg. of 3)
CMA8011084	CMA 11 6 kDa Metal Free Microdialysis Probe, 4 mm membrane length (pkg. of 3)
CMA8012511	CMA 11 55 kDa Microdialysis Probe, 1 mm membrane length, pkg. of 3
CMA8012512	CMA 11 55 kDa Microdialysis Probe, 2 mm membrane length, pkg. of 3
CMA8012513	CMA 11 55 kDa Microdialysis Probe, 3 mm membrane length, pkg. of 3
CMA8012514	CMA 11 55 kDa Microdialysis Probe, 4 mm membrane length, pkg. of 3
CMA8012521	CMA 11 500 kDa Microdialysis Probe, 1 mm membrane length, pkg. of 3



NEW CMA 11 PROBE FOR BIG MOLECULES!

The CMA 11 Microdialysis Probe is ideal for discrete areas in the CNS due to its greater spatial resolution and reduced size. It causes less tissue damage than other probe types due to its small diameter.

The probe has a cuprophane membrane with an outside diameter of 0.24 mm. The outer steel shaft diameter is 0.38 mm. The inner cannula is constructed of fused silica coated with polyimid. The inlet/outlet capillaries are mounted in a white plastic body matched to the size of a corresponding guide cannula.

New CMA 11 microdialysis probes are now available with a 55 kDa cut-off and 0.26 mm outer diameter (more details in the Specifications section).

New CMA 11 microdialysis probes for big molecules are also now available with 500 kDa and 2 MDa cut-off, 0.28 mm outer diameter and 14 mm shaft length (more details in the Specifications section).

Once implanted, the probe sits tightly in the guide cannula's capsule without the need for screwing or cementing. FEP tubing is connected to the probe using tubing adaptors.

Standard part numbers are available for metal free or β -irradiated CMA 11 6kDa probes.

For metal free or β-irradiated CMA 11 55 kDa, 500kDa and 2MDa probes, please make your request using our and send it to our Technical Support Team (/technical-support/). We will contact you promptly.

CMA 11 Microdialysis Probes are guaranteed for single use.

SPECIFICATIONS

Specifications CMA8309581 CMA8309582 CMA8309583 CMA8309584 CMA8011081 CMA8011082 CMA8011083 CMA8011084 CMA8011001 CMA8011002 CMA8011003 CMA8011004 CMA801251

Membrane Length	1 mm	2 mm	3 mm	4 mm	1 mm	2 mm	3 mm	4 mm	1 mm	2 mm	3 mm	4 mm	1 mm	2 mm	3 mm	4 mm	1 mm
Membrane O D	0.24 mm	0.26 mm	0.26 mm	0.26 mm	0.26 mm	0.28 mm											
Membrane Material	Cuprophan e	Cuprophan e	Cuprophan e	Cuprophan e	Cupropha ne	Polyesters ulfone (PE S)											
Molecular Weight Cut-off	6 kD	55 kD	55 kD	55 kD	55 kD	500 kD											

Specifications CMA8309581 CMA8309582 CMA8309583 CMA8309584 CMA8011081 CMA8011082 CMA8011083 CMA8011084 CMA8011001 CMA8011002 CMA8011003 CMA8011004 CMA8012511 CMA8012512 CMA8012513 CMA8012513 CMA8012513 CMA8012513 CMA8012514 CMA8012

Shaft Diameter	0.40 mm	0.40 mm	0.40 mm	0.40 mm	0.40 mm	0.40 mm	0.40 mm	0.40 mm	0.40 mm								
Shaft Length Metric	14 mm	14 mm	14 mm	14 mm	14 mm	14 mm	14 mm	14 mm	14 mm								
Intlet Volume	negligible	negligible	negligible	negligible													
Outlet Volume	1 μL	1 μL	1 μL	1 μL	1 μL	1 μL	1 μL	1 μL	1 μL								
Model	Standard	Standard	Standard	Standard	Metal Free	Metal Free	Metal Free	Metal Free	β- Irradiated	β- Irradiated	β- Irradiated	β- Irradiated	Standard	Standard	Standard	Standard	Standard

CMA 12 Microdialysis Probes

The CMA 12 Microdialysis Probe is ideal for stereotaxic work in the CNS of anesthetized or conscious animals.

- Optimized for CNS use
- Ideal for chronic implantation
- Available membrane: PAES, 20kDA MWCO or PES, 100 kDA MWCO
- Membrane lengths: 1, 2, 3 or 4 mm
- Membrane diameter: 0.5 mm
- Available metal free

Item No.	Description
CMA8010431	CMA 12 Elite Probe - 1 mm (pkg. of 3)
CMA8010432	CMA 12 Elite Probe - 2 mm (pkg. of 3)
CMA8010433	CMA 12 Elite Probe - 3 mm (pkg. of 3)
CMA8010434	CMA 12 Elite Probe - 4 mm (pkg. of 3)
CMA8309661	CMA 12 HighCO Probe - 1 mm (pkg. of 3)
CMA8309662	CMA 12 HighCO Probe - 2 mm (pkg. of 3)
CMA8309663	CMA 12 HighCO Probe - 3 mm (pkg. of 3)
CMA8309664	CMA 12 HighCO Probe - 4 mm (pkg. of 3)
CMA8011201	CMA 12 Elite Metal Free Probe -1 mm (pkg. of 3)
CMA8011202	CMA 12 Elite Metal Free Probe - 2 mm (pkg. of 3)
CMA8011203	CMA 12 Elite Metal Free Probe - 3 mm (pkg. of 3)
CMA8011204	CMA 12 Elite Metal Free Probe - 4 mm (pkg. of 3)
CMA8011221	CMA 12 HighCO Metal Free Probe - 1 mm (pkg. of 3)
CMA8011222	CMA 12 HighCO Metal Free Probe - 2 mm (pkg. of 3)
CMA8011223	CMA 12 HighCO Metal Free Probe - 3 mm (pkg. of 3)
CMA8011224	CMA 12 HighCO Metal Free Probe - 4 mm (pkg. of 3)



The CMA 12 Microdialysis Probe is ideal for stereotaxic work in the CNS of anesthetized or conscious animals.

A semi-permeable membrane is glued between the tip of the inner steel cannnula and the outer steel shaft. The perfusion fluid enters the membrane space through two holes in the inner cannula and flows into the shaft to the outlet.

All metal parts are treated to prevent oxidation of labile compounds in the perfusate. The membrane is available in both 20 000 and 100 000 Daltons cut-off as standard. The inlet/outlet capillaries are mounted in a blue plastic body matched to the size of a corresponding CMA 12 guide cannula.

Once implanted, the probe sits tightly in the guide cannula's capsule without the need for screwing or cementing. FEP tubing can be connected to the probe using tubing adaptors. The CMA 12 Microdialysis Probes are guaranteed for single use, however, with proper care, they may be reused several times. Complete instructions are included.

SPECIFICATIONS

Specifications	CMA8010431	CMA8010432	CMA8010433	CMA8010434	CMA8309661	CMA8309662	CMA8309663	CMA8309664
Membrane Length	1 mm	2 mm	3 mm	4 mm	1 mm	2 mm	3 mm	4 mm
Membrane O D	0.5 mm	0.5 mm	0.5 mm	0.5 mm				
Membrane Material	PAES	PAES	PAES	PAES	PES	PES	PES	PES
Molecular Weight Cut- off	20 kDA MWCO	20 kDA MWCO	20 kDA MWCO	20 kDA MWCO	100 kDA MWCO	100 kDA MWCO	100 kDA MWCO	100 kDA MWCO
Shaft Diameter	0.64 mm	0.64 mm	0.64 mm	0.64 mm				
Shaft Length Metric	14 mm	14 mm	14 mm	14 mm				
Intlet Internal Volume	negligible	negligible	negligible	negligible	negligible	negligible	negligible	negligible

Specifications	CMA8010431	CMA8010432	CMA8010433	CMA8010434	CMA8309661	CMA8309662	CMA8309663	CMA8309664
Outlet Internal Volume	0.3 μL	0.3 μL	0.3 μL	0.3 μL	0.3 μ	0.3 μ	0.3 μ	0.3 μ
Model	Standard							

CMA 20 Microdialysis Probes

The CMA 20 Microdialysis Probe is designed for dialysis experiments in moving soft tissues such as muscle, heart, skin and adipose tissue, as well as in blood, vitreous fluid of the eye, etc.

- Tailored for dialysis in peripheral tissues and blood vessels
- Inlet and outlet tubing is attached
- Soft, non-metallic construction
- Available membranes: PAES, 20 kDa MWCO or PES, 100 kDa MWCO
- Membrane lengths: 4 or 10 mm

Exciting new applications in soil analysis! See Journal Articles.

Item No.	Description
CMA8010435	CMA 20 Elite Probe - 4 mm (pkg. of 3)
CMA8010436	CMA 20 Elite Probe - 10 mm (pkg. of 3)
CMA8309670	CMA 20 HighCO Probe - 4 mm (pkg. of 3)
CMA8309671	CMA 20 HighCO Probe - 10 mm (pkg. of 3)



The CMA 20 Microdialysis Probe is designed for dialysis experiments in moving soft tissues such as muscle, heart, skin and adipose tissue, as well as in blood, vitreous fluid of the eye, etc.

As with the other models, the probe is of concentric construction, but is made completely from plastic materials. Due to its flexibility, the probe must be implanted in the tissue with the help of a steel needle and a split tubing – the Introducer. The membrane is available in both 20,000 and 100,000 Daltons cutoff.

All CMA 20 packages are provided with 3 Introducers and 9 Split Tubing.

SPECIFICATIONS

Specifications	CMA8010435	CMA8010436	CMA8309670	CMA8309671

Membrane Length	4 mm	10 mm	4 mm	10 mm
Membrane O D	0.5 mm	0.5 mm	0.5 mm	0.5 mm

Specifications CMA8010435 CMA8010436 CMA8309670 CMA8309671

Membrane Material	PAES	PAES	PES	PES
Molecular Weight Cut-off	20 kDA MWCO	20 kDA MWCO	100 kDA MWCO	100 kDA MWCO
Polyurethane Shaft Diameter	0.77 mm	0.77 mm	0.77 mm	0.77 mm
Probe Length (shaft+membrane) Metric	24 mm	24 mm	24 mm	24 mm
Intlet Internal Volume	1.4 μL	1.4 µL	1.4 µL	1.4 µL
Outlet Internal Volume	0.3 μL	0.3 μL	0.3 μL	0.3 µL
membrane	3.2 µL	2.6 µL	3.2 µL	2.6 µL
200 mm Inlet tubing (blue)	3.6 µL	3.6 µL	3.6 µL	3.6 µL
200 mm Outlet tubing (transp.)	3.6 µL	3.6 µL	3.6 µL	3.6 µL

CMA 30 Linear Microdialysis Probes

The CMA 30 Linear Microdialysis Probe is ideal for peripheral tissues such as skin, muscle, heart, adipose tissue, liver, eye, pancreas and other organs as well as tumors.

- Tailored for dialysis in peripheral tissues as well as for spinal cord and tumors
- Soft and flexible construction
- Can be sterilized with ethylene oxide
- Available membrane: Cuprophane, 6 kDa MWCO
- Membrane lengths 10 mm

Item No.	Description	
CMA8010460	CMA 30 Linear Microdialysis Probe, 10 mm membrane length (pkg. of 4)	



The probe consists of a tubing in which the middle part has a 10 mm window with a Cuprophane membrane, 6,000 Daltons cut off. Along the membrane, in this window, a thin part of the tubing remains to increase the stability and also to secure the membrane during withdrawal from the tissue. The probe is easy to implant with an introducer needle that is included in the package.

The inlet of the probe has a Luer lock connector, which can be attached to a single use syringe. Or, if a glass syringe and tubing adapter will be used, this connector can easily be cut off and discarded.

One package contains 4 probes, each in an individual pouch for easy handling.

The probes can be sterilized in its package with Ethylene Oxide.

SPECIFICATIONS

Specifications

	Mem	brane	Len	ath
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CMA8010460

10 mm

Specifications

CMA8010460

Membrane O D	0.24 mm
Membrane Material	Cuprophane
Molecular Weight Cut-off	6 kDA MWCO
Tubing Material	Polyimide
Tubing ID/OD	0.28 mm/0.38 mm
Inlet and Outlet lengths	245 mm
Double Tubing OD	0.63 mm
Introducer length	26 mm
Introducer Diameter	0.7, 22 G

CMA 31 Linear Microdialysis Probes

The CMA 31 Linear Microdialysis Probe is ideal for peripheral tissues such as skin, muscle, heart, adipose tissue, liver, eye, pancreas and other organs as well as tumors.

- Ideal for peripheral tissues as well as for spinal cord and tumors
- Soft and flexible construction
- Can be sterilized with ethylene oxide
- Available membrane: PAES, 55 kDa MWCO
- Membrane lengths 10 mm

Item No.	Description
CMA8010631	CMA 31 Linear Microdialysis Probe, 10 mm membrane length (pkg. of 4)



The CMA 31 Linear Microdialysis Probe is ideal for peripheral tissues such as skin, muscle, heart, adipose tissue, liver, eye, pancreas and other organs as well as tumors.

The probe is very thin, made with a unique patented design with a 10 mm membrane, 55,000 Daltons cut-off. This membrane allows studies on a wide range of substances.

The probe is easy to implant using an introducer needle that is included. The inlet of the probe has a Luer lock connector, which can be attached to a single-use syringe, or removed in order to use a glass syringe with a fixed needle and a tubing adapter. To maintain fluid balance between the tissue and dialysate it is recommended to use 3% Dextran 60 in the perfusion fluid.

One package contains 4 probes, each in an individual pouch for easy handling and/or sterilization (EtO) if necessary.

The probes are guaranteed for single use.

SPECIFICATIONS

Specifications

CMA8010631

Membrane Length	10 mm
Membrane O D	0.26 mm
Membrane Material	Polyethersulfone
Molecular Weight Cut-off	55 kDA MWCO
Tubing Material	Polyimide
Tubing ID/OD	0.12 mm/0.19 mm
Inlet and Outlet lengths	350mm/100mm
Double Tubing OD	0.63 mm
Introducer length	25 mm
Introducer Diameter	0.6, 23 G

CMA Custom Probes & Guides

A variety of different constructions and sizes of microdialysis probes and guides are available for various organs and biological species.

- Customer specified shaft length
- Customer specified membrane length
- Different membrane materials
- β-irradiated probes
- Metal free probes
- Customized guides

For any quote request and order, the following has to be completed.

Consult us for information and ordering conditions.

Item No.	Description
CMA8010391	CMA 7 Custom Made Microdialysis Probes (pkg. of 3)
CMA8012401	CMA 8 Custom Made Microdialysis Probes (pkg. of 3)
CMA8010394	CMA 11 Custom Made Microdialysis Probes (pkg. of 3)
CMA8010397	CMA 12 Custom Made Microdialysis Probes (pkg. of 3)
CMA8010400	CMA 20 Custom Made Microdialysis Probes (pkg. of 3)
CMA8010498	CMA 30 Linear Custom Made Microdialysis Probes (pkg. of 4)
CMA8010313	CMA 7 Custom Made Guide Cannula (pkg. of 3)

Rem No.	Description
CMA8012404	CMA 8 Custom Made Guide Cannula (pkg. of 3)
CMA8309029	CMA 11 Custom Made Guide Cannula (pkg. of 3)
CMA8309008	CMA 12 Custom Made Guide Cannula (pkg. of 3)

Item No.

Description



DETAILS

A variety of different constructions and sizes of microdialysis probes and guides are available for various organs and biological species. Similarly, the length, the molecular weight cut-off, and the type of membrane should be optimized according to the physio-chemical characteristics of recovered molecules.

Besides the five standard types and lengths of microdialysis probes, CMA Microdialysis also offers custom-made probes of specific materials and in various geometries.

Some typical examples are: a metal free CMA 8 Microdialysis Probe for combined microdialysis and NMR studies or a CMA 12 Microdialysis Probe with a shorter or longer shaft length.

 $\beta\text{-irradiated}$ probes are also available as Custom Made.

For any quote request and order, the following has to be completed.

Consult us for information and ordering conditions.

CMA Guide Cannulae

The CMA 7, CMA 8, CMA 11 and CMA 12 Guide Cannulae are coated with silicone on the inside in order to prevent sticking of a dummy or a probe. The guide cannula can be mounted to the stereotaxic instrument using a standard probe clip. Other small items, such as trephine drills and anchor screws are necessary for proper fixation of the guide cannula to the skull.

- Made of biocompatible polyurethane
- Can be mounted to the stereotaxic instrument
- Available for all CNS probes
- î²-irradiated guide cannulae available for CMA 7 and CMA 11 probes (Standard) as well as for the CMA 8 and CMA 12 probes (Custom Made)
- Metal free Guides availables for CMA 7, CMA 11 and CMA 12 probes (Standard) and for the CMA 8 probes (Custom Made)

Item No.	Description
CMAP000137	CMA 7 Guide Cannula (pkg. of 3)
CMA8012310	CMA 8 Guide Cannula (pkg. of 3)
CMA8309017	CMA 11 Guide Cannula (pkg. of 3)
CMA8309024	CMA 12 Guide Cannula (pkg. of 3)
CMA8010773	CMA 7 Metal Free Guide Cannula (pkg. of 3)
CMA8011085	CMA 11 Metal Free Guide Cannula (pkg. of 3)
CMA8011205	CMA 12 Metal Free Guide Cannula (pkg. of 3)



The CMA 7, CMA 8, CMA 11 and CMA 12 Guide Cannulae are coated with silicone on the inside in order to prevent sticking of a dummy or a probe. The guide cannula can be mounted to the stereotaxic instrument using a standard probe clip. Other small items, such as trephine drills and anchor screws are necessary for proper fixation of the guide cannula to the skull.

- Made of biocompatible polyurethane
- Can be mounted to a stereotaxic instrument
- β-irradiated guide cannulae available for CMA 7 and CMA 11 probes (Standard) as well as for the CMA 8 and CMA 12 probes (Custom Made)
- Metal free guides availables for CMA 7, CMA 11 and CMA 12 probes (Standard) and for the CMA 8 probes (Custom Made)

NEW! Solutions for Microdialysis of Large Molecules

NEW! SOLUTIONS FOR MICRODIALYSIS OF LARGE MOLECULES

CMA offers new complete solutions for the study of large molecules using the microdialysis techniques.

- New Microdialysis Probes for Large Molecules
- New CNS Perfusion Fluid with Dextran MW 500 kDa 3%
- New Push-Pull Set-ups

item No.	Description
CMA8012411	CMA 7 55 kDa Microdialysis Probe, 1 mm membrane length, pkg. of 3
CMA8012412	CMA 7 55 kDa Microdialysis Probe, 2 mm membrane length, pkg. of 3
CMA8012422	CMA 7 500 kDa Microdialysis Probe, 2 mm membrane length, pkg. of 3
CMA8012423	CMA 7 2 MDa Microdialysis Probe, 1 mm membrane length, pkg. of 3
CMA8012424	CMA 7 2 MDa Microdialysis Probe, 2 mm membrane length, pkg. of 3
CMA8012301	CMA 8 High Cut-Off Microdialysis Probe, 1 mm membrane length (pkg. of 3)
CMA8012302	CMA 8 High Cut-Off Microdialysis Probe, 2 mm membrane length (pkg. of 3)
CMA8012511	CMA 11 55 kDa Microdialysis Probe, 1 mm membrane length, pkg. of 3
CMA8012512	CMA 11 55 kDa Microdialysis Probe, 2 mm membrane length, pkg. of 3
CMA8012513	CMA 11 55 kDa Microdialysis Probe, 3 mm membrane length, pkg. of 3
CMA8012514	CMA 11 55 kDa Microdialysis Probe, 4 mm membrane length, pkg. of 3
CMA8012521	CMA 11 500 kDa Microdialysis Probe, 1 mm membrane length, pkg. of 3
CMA8012421	CMA 7 500 kDa Microdialysis Probe, 1 mm membrane length, pkg. of 3
75-0512	Reglo ICC Digital 2-Channel, 12-Roller Peristaltic Pump
CMA8309661	CMA 12 HighCO Probe - 1 mm (pkg. of 3)
CMA8309662	CMA 12 HighCO Probe - 2 mm (pkg. of 3)
CMA8309663	CMA 12 HighCO Probe - 3 mm (pkg. of 3)
CMA8309664	CMA 12 HighCO Probe - 4 mm (pkg. of 3)



NEW! SOLUTIONS FOR MICRODIALYSIS OF LARGE MOLECULES

CMA offers complete solutions for the study of large molecules using the microdialysis techniques.

Why large molecules in microdialysis research?

The use of the microdialysis technique for the recovery of large molecules is of increasing interest as it offers the opportunity to identify patterns of protein expression in a variety of tissue spaces as well as to evaluate useful biomarkers of disease.

From this perspective, the use of this technique contributes to a better understanding of the disease process and its diagnosis, allowing the development of more targeted approaches to therapy.

The challenges of the microdialysis of large molecules

The use of probes with large pore size membranes required for the microdialysis of large molecules creates some methodological challenges such as protein aggregation, protein adhesion, ultrafiltration and low fluid recovery/extraction efficiency. All these challenges can now be overcome by using appropriate and optimized microdialysis set-ups.

New probes for large molecules!

CMA offers a set of microdialysis probes for the recovery of large molecules (such as proteins, cytokines, growth factors, antibody and neuropeptides...) on awake rodents.

NEW! CNS Probes for Mice

- , 55 kDa, 500 kDa, 2 MDa cut-off
- ,100 kDa cut-off

NEW! CNS Probes for Rats

- , 55 kDa, 500 kDa, 2 MDa cut-off
- ,100 kDa cut-off

The probes/guides are available as metal free, beta-irradiated (sterile) and custom-made (shaft/membrane length) on demand.

How to avoid Ultra-Filtration and improve Extraction Efficiency?

New! Dextran solution for 55 to 100 kDa High Cut-off Microdialysis Probes

We recommend the use of the in order to stabilize the pressure within the probe and limit ultra-filtration.

The CNS Perfusion Fluid with Dextran 500 kDa 3% is suitable for our CNS high cut-off probes with 55 and 100 kDa cut-off for rats and mice. The Dextran 500 kDa will not diffuse out of the probe and cause additional tissue inflammation. It is reported the Dextran 500 can give fluid recovery close to 100%.

The solution is sterile, ready to use and non-buffered (so pH would not change).

• See also the Dextran 500 kDa 3% for more details

New! Push-pull set-up for 500 kDa to 2 MDa Ultra-High Cut-off Microdialysis Probes

The Dextran 500 kDa 3% solution cannot be used for the 500 kDa to 2 MDa Ultra-High Cut-off microdialysis probes because of the large pore size membranes that would let the Dextran pass into the extracellular space and cause inflammation.

One way to avoid ultra-filtration with very high cut-off membranes is to reduce the back pressure caused by the perfusion fluid coming from the probe inlet.

From this perspective, we recommend using the for Ultra-High Cut-off Probes. We have tested this pump to ensure that the minimum flow rate of the pump (0.1 µl/min) is accurate and that the 12 rollers provide a smooth flow. Flow rate and direction can be individually adjusted for each channel. The pump calibration is easy for the user. A ready to use Peristaltic Tubing Kit is available for fast connection to microdialysis FEP tubing.

• See also our Push-pull for more details.

SPECIFICATIONS



Specifications CMA8012411 CMA8012412 CMA8012422 CMA8012423 CMA8012424 CMA8012301 CMA8012301 CMA8012511 CMA8012513 CMA8012513 CMA8012513 CMA8012512 CMA8012421 CMA8012421 CMA803662 CMA803663 CMA803666 CMA803666 CMA803666

Membrane Length	1 mm	2 mm	2 mm	1 mm	2 mm	1 mm	2 mm	1 mm	2 mm	3 mm	4 mm	1 mm	1 mm	1 mm	2 mm	3 mm
Membrane O D	0.26 mm	0.26 mm	0.28 mm	0.28 mm	0.28 mm	0.26 mm	0.26 mm	0.26 mm	0.26 mm	0.28 mm	0.28 mm	0.5 mm	0.5 mm	0.5 mm	0.5 mm	
Membrane M aterial	Polyestersul fone (PES)	Polyestersul fone (PES)	Polyestersulf one (PES)	Polyestersulf one (PES)	Polyestersulf one (PES)	Polyestersul fone (PES)	Polyestersulf one (PES)		Polyestersul fone (PES)	Polyestersul fone (PES)	Polyestersul fone (PES)	PES	PES	PES	PES	
Molecular Weight Cut- off	55 kD	55 kD	500 kD	2 MDa	2 MDa	55 kD	55 kD	55 kD	55 kD	500 kD	500 kD	100 kDA MWCO	100 kDA MWCO	100 kDA MWCO	100 kDA MWCO	
Shaft Diameter	0.40 mm	0.40 mm	0.40 mm	0.40 mm	0.40 mm	0.64 mm	0.64 mm	0.64 mm	0.64 mm							
Shaft Length Metric	7 mm	14 mm	14 mm	14 mm	14 mm	14 mm	7 mm	14 mm	14 mm	14 mm	14 mm	-				
Inlet Volume	0.06 µL	0.06 μL	0.06 μL	0.06 μL	0.06 μL	0.1 μL	0.1 μL	0.1 μL	0.1 μL	0.1 μL	0.06 μL					•
Outlet Volume	0.3 μL	1 μL	1 μL	1 μL	1 μL	1 μL	0.3 μL									
200 mm Inlet tubing (blue)	3.6 µL	3.6 µL	3.5 µL	3.5 µL	3.5 µL	3.5 µL						•				
200 mm Outlet tubing (transp.)	3.6 µL	3.6 µL	3.5 µL	3.5 µL	3.5 µL	3.5 µL										
Model	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard							

Reglo ICC Digital Peristaltic Pump

The Reglo Independent Channel Control (ICC) Digital Peristaltic Pumps provide individually addressable control of each fluidic channel, eliminating the clutter of multiple pumps on the benchtop. Each channel is independently programmable from the pump or the computer.

Note: 12-Roller models (750511, 75-0512 and 750515) can be used for microdialysis applications.

Item No.	Description
75-0070	Reglo ICC Digital 3-Channel, 8-Roller Peristaltic Pump
75-0510	Reglo ICC Digital 2-Channel, 8-Roller Peristaltic Pump
75-0511	Reglo ICC Digital 4-Channel, 12-Roller Peristaltic Pump
75-0512	Reglo ICC Digital 2-Channel, 12-Roller Peristaltic Pump
75-0513	Reglo ICC Digital 2-Channel, 6-Roller Peristaltic Pump
75-0514	Reglo ICC Digital 3-Channel, 6-Roller Peristaltic Pump
75-0515	Reglo ICC Digital 3-Channel, 12-Roller Peristaltic Pump
73-3054	MS/CA Pressure Lever Cassette Cartridge, 3-Stop, POM-C



The Reglo Independent Channel Control (ICC) Digital Multi-Channel Peristaltic Pumps allow individual control of the flow and direction of each fluidic channel. Each channel is independently programmable from the pump's intuitive keypad or via the computer. A single compact unit delivers continuous pumping or precision dispensing with the capability of bidirectional flow in each channel. Plus, independent channel calibration minimizes tube-to-tube differences, resulting in the best calibration accuracy possible in a multichannel peristaltic pump.

Features

- Continuous pumping or precision dispensing
- Flexibility of bi-directional flow in each channel
- Flow rate 0.002 ml/min to 43 ml/min depending on version and tube size
- Easy-to-use tubing cassettes allow quick changeovers
- USB interface for quick connections
- Available with two or four channels, each with independent functionality

• PC control or keypad control

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Operating Modes

Flow Rate	Continuous operation at a set rate and direction
Volume over Time	Dispensing a desired volume over a desired time
Volume	Dispensing a desired volume at a set flow rate
Time Mode	Dispensing for a set time duration with a set flow rate
Volume with Pause	Dispensing a set volume over multiple cycles with defined pause time in between
Time with Pause	Dispensing for a set time duration over multiple cycles with defined pause time in between
Calibration	Allows each channel to be calibrated for dispensed fluid volume accuracy

SPECIFICATIONS

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	75-0070	75-0510	75-0511	75-0512	75-0513	75-0514	75-0515
Control Type	Variable- Speed Digital						
Minimum RPM	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Maximum RPM	100	100	100	100	100	100	100
Number of Channels	3	2	4	2	2	3	3
Number of Rollers	8	8	12	12	6	6	12
Max Flow Rate (mL/min)	35	35	24	24	43	43	24

Max Flow Rate per Channel	35	35	24	24	43	43	24
(mL/min) Maximum	14.5/1	14.5/1	14.5/1	14.5/1	14.5/1	14.5/1	14.5/1
Pressure (PSI/Bar)							
Number of Rollers	8	8	12	12	6	6	12
Accuracy	±1%	±1%	±1%	±1%	±1%	±1%	±1%
Power (VAC)	100 to 240						
Power (Hz)	50/60	50/60	50/60	50/60	50/60	50/60	50/60

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