



## OFM *Products*

NOVEMBER 2020



## OFM Pumps

### MPP102 PC

#### Microperfusion Pump for Preclinical OFM Studies

OFM achieves a stable flow rate by using a specialized peristaltic OFM pump. Unfiltered samples represent the interstitial fluid for relative and absolute quantification of substances in the target tissue.

- Push and pull option integrated in one pump
- 2 independent controllable pump heads
- 6 channels (3 per pump head)
- Up to 3 push and 3 pull channels
- Standard flow rates: 0.1 – 10  $\mu\text{L}/\text{min}$
- No flow-rate calibration necessary
- Attachable to large animals (dog, pig & primate)
- Perfusion buffer delivered in an enclosed, sealed and gamma-irradiated bag
- Compatible low-bind tubing set

**Adjustable flow rates** from 0.1 – 10  $\mu\text{L}/\text{min}$

Flow rate **resolution**:

0.1  $\mu\text{L}/\text{min}$  (0.1 – 2.0  $\mu\text{L}/\text{min}$ )

0.2  $\mu\text{L}/\text{min}$  (2.0 – 5.0  $\mu\text{L}/\text{min}$ )

0.5  $\mu\text{L}/\text{min}$  (5.0 – 10.0  $\mu\text{L}/\text{min}$ )

**Typical operating time (with a new battery):**

up to 48 hours at 1.0  $\mu\text{L}/\text{min}$

**Display:** LCD with backlight

**Dimensions:** 130 x 92 x 34.5mm

**Total weight:** 295g excl. battery and accessories

- Power supply with main supply or primary battery
- Includes power supply
- Battery not included



## OFM Probe for Skin and Adipose Tissue

### a/d OFM-P-15

#### Linear OFM Probe for Skin and Adipose Tissue

##### ISF Sampling in Dermal and Adipose Tissue – dOFM and aOFM

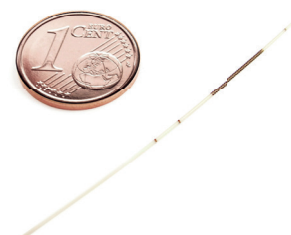
- Inert & low-adsorptive polymer, outer diameter 0.55mm, inner diameter 0.40mm, exchange area 15mm
- Shaft length 200mm
- Includes mandrel (stainless steel)
- All a/dOFM supplies are gamma-irradiated

##### dOFM – dermal OFM

- Linear push-pull type probes that are membrane-free with macroscopic openings
- Used for sampling of peptides, proteins, antibodies, lipophilic substances, bound and unbound drugs, transporters, enzymes, nanocarriers and vesicles
- Concentrations and action of dermatological drugs (PK/PD) are measured directly in the dermis
- Transport and effects of drugs are monitored after topical or systemic application (e.g., topical glucocorticoids and systemic antibodies in psoriatic or inflammatory animal models)

##### aOFM – adipose OFM

- Concentrations and action of drugs (PK/PD) are measured directly in adipose tissue
- Independent of the mode of administration (oral, subcutaneous, topical, intravenous or other)
- Can be combined with glucose-clamp techniques to investigate e.g. insulin sensitivity as well as insulin concentrations and the effects in subcutaneous tissue



## OFM Probe Kit for Brain Tissue

### cOFM-P-X-Y

#### Concentric OFM Probe Kit for Brain Tissue (Xmm shaft, Ymm open surface)

##### cOFM – cerebral OFM

- Probes are membrane free push-pull type probes with macroscopic openings
- Allows sampling of peptides, proteins, antibodies, lipophilic substances, bound and unbound drugs, enzymes, nanocarriers, vesicles and cells
- Allows sampling of drugs and endogenous substances in brain tissue with an intact BBB (Blood Brain Barrier)
- Allows continuous monitoring of BBB intactness
- Allows continuous monitoring of drug transport across the intact BBB
- Allows long-term monitoring for up to 30 days

Inert & low adsorptive polymer,  
different probe lengths on request

0.5mm OD

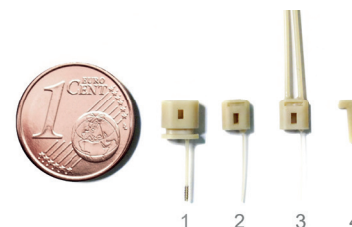
Sampling insert 0.2mm ID

Shaft length X (2/3/4/5/6/8)mm

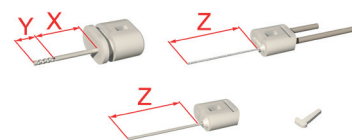
Open length Y (1/2)mm

Length  $Z=X+Y$  (3/4/5/6/8/9/10)mm

Gamma-irradiated



- 1 - Guide
- 2 - Healing Dummy
- 3 - Sampling Insert
- 4 - Locking Wedge



## OFM Guide/Dummy for cOFM Probes

### cOFM-GD-X-Y

#### Concentric OFM Guide/Dummy for Brain Tissue (Xmm shaft, Ymm open surface)

Inert & low adsorptive polymer,  
different probe lengths on request

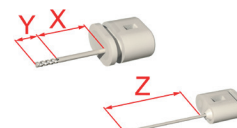
0.5mm OD

Shaft length X (2/3/4/5/6/8)mm

Open length Y (1/2)mm

Length  $Z=X+Y$  (3/4/5/6/8/9/10)mm

Gamma-irradiated



## Sampling Insert Replacement

### cOFM-S-Z

#### Sampling Insert Replacement (Zmm)

Inert & low adsorptive polymer,  
different lengths on request

Sampling insert 0.2mm

Length  $Z=X+Y$  (3/4/5/6/8/9/10)mm

Gamma-irradiated



## Healing Dummy Replacement

### cOFM-D-Z

#### Healing Dummy Replacement (Zmm)

Inert & low adsorptive polymer,  
different lengths on request

Healing dummy 0.2mm

Length  $Z=X+Y$  (3/4/5/6/8/9/10)mm

Gamma-irradiated



## Custom OFM Probe Kit for Brain Tissue

**cOFM-P-C-Y**      **cOFM Probe**  
**customized shaft Length up to 20mm, open length 1 or 2mm**  
 Gamma-irradiated

## Tubing and Accessories

**OFM-PP2-100-LB**      **Universal Push-Pull Low-Bind Tubing**  
 Dual channel (1 push, 1 pull) tubing for universal use, 1m length to be cut  
 One Luer for connection to OFM Bag (push side)  
 Gamma-irradiated



**OFM-T1-100-LB**      **Low-Bind Tubing 0.25mm**  
 1m extension tubing with inner diameter of 0.25mm  
 Gamma-irradiated



**OFM-T2-100-LB**      **Low-Bind Tubing 0.13mm**  
 1m extension tubing with inner diameter of 0.13mm  
 Gamma-irradiated



**OFM PS3-75**      **dOFM 3-channel Push Tubing**  
 Luer lock premounted for use with OFM Perfusate Bag  
 For connection from OFM Perfusate Bag to pump head (push side)  
 For up to 3 probes  
 Gamma-irradiated



**OFM PL3-75**      **dOFM 3-channel Pull Tubing**  
 For connection from dOFM probe to sample collection (pull side)  
 For up to 3 probes  
 Gamma-irradiated



**OFM-PL3-75-LB**      **dOFM 3-channel Pull Low-Bind Tubing**  
 For connection from dOFM probe to sample collection (pull side)  
 For up to 3 probes  
 Gamma-irradiated



OFM-STH-1

### cOFM Stereotactic Probe Holder

Stereotactic probe holder is designed to precisely position cOFM probe in the brain



OFM-ANI-1

### Autosampler Needle Insert

To avoid adsorption at the stainless steel needle  
Gamma-irradiated  
With guide wire for insertion



OFM-BAG

### OFM Perfusate Bag 10mL

For use with OFM Pump  
Ready for connection to up to 3 push channels  
Bag can be placed into OFM Pump or mounted externally  
Perfusate not included  
Gamma-irradiated



cOFM-LOCK

### Lock Replacement



MD-1510

### µD-Connector MD-1510

Flanged tubing connectors - clear  
Connect tubing with probes, syringes, swivels or connectors  
Soak connectors in 70% ethanol prior to use  
Connectors slide on easily, and then shrink as the alcohol evaporates



## Service and Maintenance\*

MPP102\_SP1

### Service Package 1- Yearly Inspection and Maintenance for 1 OFM Pump

Visual inspection, detailed inspection of pump heads, calibration of flow rates, adjustment of flow rates

MPP102\_SP2

### Service Package 2 - Change of Pump Heads for 1 OFM Pump

Indicated after 3,000-10,000 hours of operation

MPP102\_SP3

### Service Package 3 - Change of Motor Unit for 1 OFM Pump

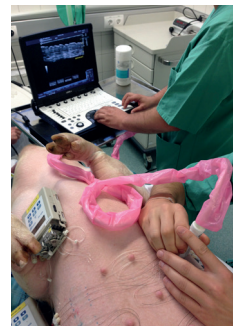
Indicated after 3,000-10,000 hours of operation

## JR-Inhouse Demonstration and Training\*\*

OFM\_TP1

### General Usage and Handling of OFM Equipment

Individual training  
4 hours intensive course  
Max. number of participants: 10



OFM\_TP2

### aOFM/dOFM Sampling Setup: Preclinical in Pigs or Rats

Duration ~ 8 hours, max. 5 participants per course

OFM\_TP3

### cOFM Sampling Setup: Preclinical in Rats or Mice

Duration ~ 8 hours, max. 2 participants per course

OFM\_TP4

### cOFM Implantation Training in Rats or Mice

Duration ~ 8 hours, max. 2 participants per course

OFM\_SE1

### OFM Study Design and Consulting

\* other repairs on request

\*\* external training will be charged extra

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