

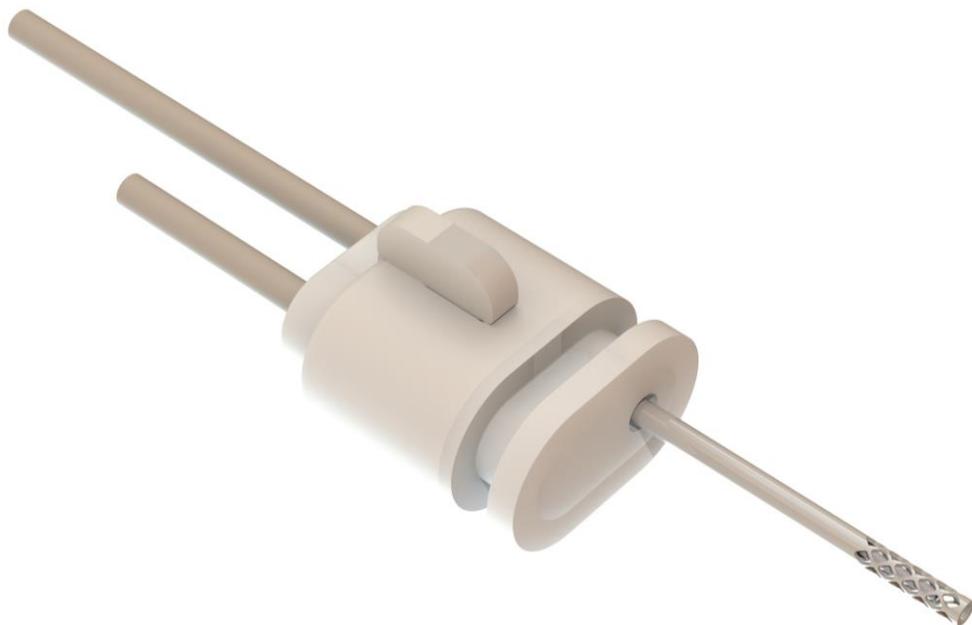


## INSTRUCTIONS FOR USE



### CEREBRAL OFM (cOFM) PROBE KIT

#### FOR LABORATORY USE



Instructions for cOFM Probe Kit for Brain Tissue (cOFM-P-X-Y)

consisting of:

Guide + Healing Dummy (cOFM-GD-X-Y)

Sampling Insert (cOFM-S-Z)

cOFM-LOCK

All parts can also be ordered individually

**READ** Instructions for use before using the product! **ALWAYS** follow the warnings, cautions, and notes throughout this document. If you have questions regarding the safe or correct use of the product, please contact **your distributor**.



This document is available via download link. If required, a paper version can be requested from the distributor.

## 1 Intended Use

The cOFM Probe is a minimally invasive concentric probe for use in brain tissue during preclinical studies / laboratory use.

**The investigator is responsible for the specific use of the products and compliance with all national regulations regarding the use of laboratory animals.**

### CAUTION



**DO NOT** use on humans! This cOFM Probe has **NOT** been approved for use on humans!

**USE** cOFM Probe on laboratory animals or ex-vivo setups **ONLY**.

**DO NOT** use cOFM Probe on household pets and other non-laboratory animals.

The cOFM Probe allows extracting fluid samples from the brain enabling to analyse its biochemical conditions. For example, the cOFM Probe can be used to sample substances in the cerebral interstitial fluid with intact blood brain barrier (BBB). Therefore, a physiologically compatible liquid ('perfusate') is passed through the cOFM Probe at a very low flow rate (0.1 - 10µl/min) ('microperfusion'). Due to the open (membrane-free) exchange surface, the perfusate can absorb practically any substances in the surrounding environment.

## 2 Directions for Use

### 2.1 Included Parts of cOFM Probe

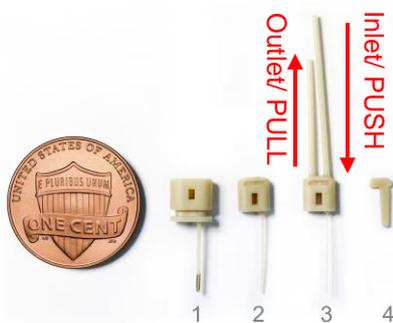


Figure 1: cOFM Probe consists of Guide (1), Healing Dummy (2), Sampling Insert (3), and Lock (4).

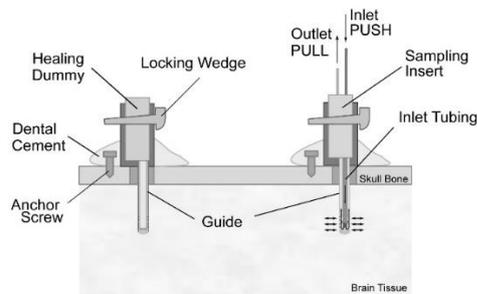


Figure 2: Schemata of implanted cOFM Probe.

## 2.2 Inserting cOFM Probe Into Brain Tissue

**Attention:** Work as sterile as possible during the whole process!

1. Guide (1), Healing Dummy (2) and Lock (4) are delivered pre-assembled and ready for implantation.
2. Work on a clean surgical surface to avoid immune reactions.
3. Prepare the stereotactic apparatus and an anesthesia mask for the appropriate animal size.
4. Prepare surgical instruments, eye cream, shaver, dental drill and dental cement within easy reach.
5. Anesthetize animal with a suitable anesthetic for 30 to 45 minutes.
6. Fix the animal in the stereotactic apparatus.
7. Shave the fur on the head and disinfect the skin.
8. Make a midline incision to expose lambda and bregma.
9. Use the stereotaxic apparatus to identify the desired position of the cOFM Probe and the fixation screws (e.g. Two for mice and three for rats).
10. Drill three 0.7mm holes into the skull above the chosen site.
11. Puncture the dura with a needle carefully.
12. Attach the cOFM Probe (Healing Dummy fixed with Lock inside the Guide) with the appropriate adapter to the stereotaxic apparatus.
13. Implant the cOFM Guide in a desired depth with the stereotaxic apparatus at a speed of 1mm/min.
14. Insert screws.
15. Place the dental cement around the cOFM Guide and the fixation screw.
16. Cure the dental cement and remove the cOFM Probe from the stereotaxic apparatus.
17. Close the skin above the dental cement and leave the cOFM Guide point out of the skin.
18. Recover the animal from anesthesia in a warm place.
19. Apply antibiotic (e.g. Cefotaxin) for the first 3 days after surgery.
20. Let the BBB recover for 14 days.
21. To enable sampling remove the Lock and replace the Healing Dummy by the Sampling Insert (4). Secure the Sampling Insert by re-using the Lock.

## 2.3 Connecting Accessories

For connecting accessories, refer to the corresponding instructions for use for OFM Microperfusion Pump MPP102 PC and OFM Tubing Set.



### **BIOHAZARD**

**Used and removed cOFM Probes are biohazardous and must be disposed accordingly!**

### 3 Combination with Other Products

For optimal performance, use the cOFM Probe with the following manufacturer-approved accessories like:

- Microperfusion Pump MPP102 PC
- OFM Tubing (preclinical)
- OFM Perfusate Bag (preclinical)



#### CAUTION

When using above-listed products with the cOFM Probe, **ALWAYS** observe the Instructions for Use of the respective product!

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