

Surgery Model #: MICRODIAL-R & MICRODIAL-M Microdialysis Probe Implants Care and Use Document for Rats and Mice

Anesthetic: Isoflurane to effect

Analgesic: Buprenorphine (SQ): Rat and Mouse Dose 0.05 mg/kg

Basic Surgical Procedure Description:

An anesthetized and surgically prepared animal is immobilized in a stereotaxic frame. A 2-cm midsagittal skin incision is made on the scalp in order to visualize the skull landmarks: bregma and lambda. Blunt dissection is used to separate and retract the underlying fascia. A flat skull position is confirmed and implant placement coordinates are calculated. Three holes are drilled to accept three anchoring screws, while a fourth hole is drilled to accept the implant. A sterile microdialysis guide and stylet are stereotaxically placed. Screws are used in both mice and rats to anchor the guide implant in place. Additionally, in rats the guide is bonded to the skull and screws via cranioplastic cement while in mice the implant is attached with a fast curing dental cement. The guide is sealed with the aforementioned stylet.

Materials:

Microdialysis materials may be purchased from Bioanalytical Systems, Inc (BAS).

MD-2250 (rubber O-ring fastener) and **MD-2251** (metal Omega-ring fastener) are for rats, 10mm in length and sold as guide/stylet sets. Specify **MD-2255** for mice (5mm length).

Coordinates:

The customer must specify coordinates at the time of order placement.

Quality Control:

Animals are evaluated the day of shipment for health, appearance and headmount stability.

Compound Administration:

Appropriate microdialysis probes are available for purchase from BAS according to needs.

Housing:

Animals must be single housed to prevent cagemates from dislodging / damaging headmounts. With appropriate care, the guide implants are expected to last at least three weeks.