

BI-LATERAL BRAIN CANNULATION INFORMATION AND CARE & USE

This cannula system from PlasticsOne® is used for bi-lateral brain cannulation. It consists of a double guide, double dummy, double dust cap and double internal cannula.



Double Guide Cannula: The guide is the permanent cannula. It is implanted into the brain at predetermined coordinates through 2 drilled holes and secured on the skull with dental cement.

Catalog #: C235GS-5-XX/SPC: The XX equals the distance between the targeted areas; it is a minimum of 0.5 mm. This will vary depending on the distance requested between the 2 targeted areas.

Gauge: 26

Pedestal size: 5mm

Cut length*: Custom



Double Dummy Cannula: The double dummy cannula is inserted into the guide cannula. It has stylets that insert into the guide to prevent entry of material into the guide cannula when not in use.

Catalog #: C235DCS-5/SPC

Pedestal size: 5 mm

Cut length*: Custom



Double Dust Cap: The dust cap covers the guide and dummy cannulas and secures the dummy in place.

Catalog #: 303DC/1



Double Internal Cannula or Injector: The double internal or injector is inserted into the guide cannula and is used for delivery of compounds into the targeted brain areas. The injectors are shipped separately to your facility.

Catalog #: C235IS-5/SPC

Gauge: 33

Pedestal size: 5 mm

Cut length*: Custom

*Cut length equals the depth of the cannulas.

- ✓ **Please specify your custom coordinates when placing your order with Customer Service.**

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To administer a compound into the targeted brain area:

- Use aseptic technique and sterile materials.
- Attach a length of PE50 tubing to the injector cannula. To the opposite end of the tubing, insert a 23g blunted needle attached to an appropriately sized micro-syringe loaded with the test compound.
- Fill the tubing and injector with the test compound.
- Immobilize the mouse. We recommend gas anesthesia.
- Unscrew dust cap and set aside.*
- Remove the dummy cannula.
- Insert the injector cannula into the guide cannula. When correctly seated, the injector cannula locks onto the guide cannula.
- The test material can now be injected through the cannula.
- The total volume injected should not exceed 5µl and the infusion rate should not exceed 1µl/min.
- Remove the injector cannula, reinsert the dummy cannula into the guide cannula and screw the dust cap onto the dummy cannula.

**Resistance may be felt when trying to remove the dummy cannula. This resistance is likely the result of serum build up at the base of the cannula. If resistance is present, follow the steps below:*

1. *Apply sterile saline with a sterile swab or from a syringe at the base of the dummy cannula.*
2. *Let the saline sit for ~ 1minute to loosen the serum.*
3. *Gently unscrew the dummy cannula.*
4. *Repeat steps 1-3 if not successful on first attempt.*

Housing of cannulated mice:

- To prevent cannulated mice from chewing on each other's cannulas, we recommend housing them individually.
- We also recommend housing them in boxes without wire bar lids. Otherwise, the lids might interfere with and possibly dislodge the cannulas.

For additional information please contact Surgical Services at surgicalservices@jax.org