

# STANDARD BRAIN CANNULATION INFORMATION AND CARE & USE

This cannula system from PlasticsOne® is used for standard brain cannulations. It consists of a guide, dummy and internal cannula



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

Catalog#: C315GS-5/SPC

Gauge: 26

Pedestal size: 5 mm

Cut length\*: Custom



**Dummy Cannula:** The dummy cannula consists of a cap that screws onto the guide cannula. It has a stylet that inserts into the guide to prevent entry of material into the guide cannula when not in use.

Catalog #: C315DC/SPC

Pedestal size: 5 mm

Cut length\*: Custom



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

Catalog#: C315IS-5/SPC

Gauge: 33

Pedestal size: 5 mm

Cut length\*: Custom

\*Cut length equals the depth of the cannulas.

## Our Standard coordinates and cannula lengths for the lateral ventricle are:

**ML: +1.0 RC: -0.4 DV: 2.0 mm**

Guide cannula length: 2.0 mm

Dummy cannula length: To fit guide cannula with 0.2mm projection.

Internal cannulas length: To fit guide cannula with a 0.45mm projection.

## Our Standard coordinates and cannula lengths for the 3rd ventricle are:

**ML: +0.2 RC: -0.8 DV: 2.5 mm**

Guide cannula length: 2.5 mm

Dummy & internal cannulas length: To fit guide cannula with a 0.2mm projection.

- ✓ **Please specify your custom coordinates or any changes to these coordinates when placing your order with Customer Service.**

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## To administer a compound into the ventricle:

- 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 the dummy cannula and set aside.\*
- 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 and reinsert and secure the dummy cannula in the guide 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 ~ 1 minute 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](mailto:surgicalservices@jax.org).