

ALZET Catheters



Via a catheter, ALZET® Osmotic Pumps can deliver substances into the venous or arterial circulation, into the brain, or into any organ, lumen, or solid tissue.¹ DURECT Corporation offers medical grade polyethylene and vinyl catheters to enable targeted delivery to a variety of sites. Also available are a range of specialized catheters customized for a specific application and animal species. These catheters are specifically designed to attach securely onto any ALZET pump model to ensure accurate delivery. They also incorporate useful features, such as retention beads or suture patches to facilitate placement and stabilization in a vessel or tissue, as well as secure, leak-free catheter connections.

Common Routes of Administration Requiring Use of a Catheter²

- Articular cavity
- Blood vessels
- Bone
- Brain (solid tissue)
- Brain (ventricles)
- Ear
- Eye
- Muscle
- Nerves
- Spinal cord
- Stomach
- Tumors

Catheter Applications with ALZET Osmotic Pumps

- Direct delivery of test agents to any target tissue or organ
- Reduce systemic toxicity of an agent
- Delay administration of test agents to allow surgical recovery
- Infuse for a short period using a longer duration pump
- Create a time-patterned delivery of an agent

Polyethylene (PE) and Vinyl Tubing

Medical grade PE and Vinyl tubing, the most common catheter types used in laboratory animal research, are available sterile, individually packaged, and ready to use.

DESCRIPTION	ITEM NO.	LENGTH	OUTSIDE DIAMETER	INSIDE DIAMETER	VOLUME
Polyethylene Tubing (10 per bag)	0007750	15 cm (6 in)	1.22 mm (0.048 in)	0.76 mm (0.030 in)	4.566 µl/cm
Vinyl Tubing (10 per bag)	0007760	15 cm (6 in)	1.14 mm (0.045 in)	0.69 mm (0.027 in)	3.739 µl/cm



¹ Attachment to a catheter does not alter the delivery rate of ALZET pumps.

² For additional information or references on a particular route of administration, please contact ALZET Technical Support.

Rat Catheters*

NAME (Item no.)	CATHETER MATERIAL	CATHETER LENGTH & VOLUME	SPECIFICATIONS	OPTIMUM ANIMAL SIZE	FEATURES & BENEFITS
Rat Jugular Catheter (0007710)	Silicon	~15.24 cm 32-36 µl	15.24 cm (6") of silicon catheter (0.94 OD; 0.51 mm ID) with a Dacron suture patch and ALZET connection (1.19 mm OD; 0.61 mm ID)	250+ grams (for <250 gram rats, cut tip to size for proper placement)	<ul style="list-style-type: none"> Dacron patch facilitates anchoring to tissue Silicon material is very flexible and less traumatic to vessels Bevel tip if desired for easier insertion into vessels
Rat Intrathecal Catheter (0007740)	Polyurethane (PU)	~23.7 cm ~20 µl	10 cm of 28G PU (0.36 mm OD; 0.18 mm ID) connected to 12.7 cm PU (0.84 mm OD; 0.36 mm ID) and ALZET connection (1.02 mm OD; 0.61 mm ID) with stainless steel stylet	Up to 300+ grams (for <175 gram rats, cut tip to size for proper placement)	<ul style="list-style-type: none"> Teflon coated stylet for easy insertion during cannulation Protected tubing junction minimizes kinking at exit point from intrathecal space
Rat Intrathecal Catheter—Short (0007741)	Polyurethane (PU)	~15 cm 10-11 µl	10 cm of 28G PU (0.36 mm OD; 0.18 mm ID) connected to 4.0 cm PU (0.84 mm OD; 0.36 mm ID) and ALZET connection (1.02 mm OD; 0.61 mm ID) with stainless steel stylet.	Up to 300+ grams (cut distal end to desired length for proper placement)	<ul style="list-style-type: none"> Shorter length for non-occipital approach Teflon coated stylet for easy insertion during cannulation Protected tubing junction minimizes kinking at exit point from intrathecal space
Rat Femoral Catheter (0007720)	Polyurethane (PU)	~20.32 cm ~59.3 µl	20.32 cm (8") of Polyurethane catheter (1.02 mm OD; 0.61 mm ID)	Up to 300+ grams (for <175 gram rats, cut tip to size for proper placement)	<ul style="list-style-type: none"> Retention beads at 3.81, 5.08, and 7.62 cm from the tip facilitate anchoring to tissue Medical grade polyurethane softens at body temperature: reduced vessel trauma and increased catheter patency.
Rat Femoral Catheter—Tapered (0007730)	Opaque Polyurethane	~20.32 cm ~59.3 µl	20.32 cm (8") of tapered radio-opaque polyurethane (1.40 mm to 0.99 mm OD; 0.61 mm constant ID)	Up to 300+ grams (for <175 gram rats, cut tip to size for proper placement)	<ul style="list-style-type: none"> Retention beads at 3.81, 5.08, and 7.62 cm from the tip facilitate anchoring to tissue Medical grade, tapered polyurethane minimizes kinking Radio-opaque material and smooth surface minimize clotting

Mouse Catheters*

NAME (Item no.)	CATHETER MATERIAL	CATHETER LENGTH & VOLUME	SPECIFICATIONS	OPTIMUM ANIMAL SIZE	FEATURES & BENEFITS
Mouse Jugular Catheter (0007700)	Polyurethane (PU)	~8.8 cm ~10.2 µl	13mm of 28G PU (0.36 mm OD; 0.18 mm ID) connected to 63.5 mm PU (0.84 mm OD; 0.36 mm ID) and ALZET connection (1.02 mm OD; 0.61 mm ID)	30+ grams (can be cut at tip to adapt for smaller animals)	<ul style="list-style-type: none"> Retention beads at 13 and 38 mm from the tip facilitate anchoring to tissue Marked at 9 and 11 mm to simplify adaptation for <25 and 25-30 gram animals respectively
Mouse Jugular Catheter-Adjustable Length (0007701)	Polyurethane (PU)	~8.8 cm ~18 µl	13mm of 28G PU (0.36 mm OD; 0.18 mm ID) connected to 25.4 mm PU (0.84 mm OD; 0.36 mm ID) connected to a 50 mm ALZET connection (1.02 mm OD; 0.61 mm ID).	30+ grams (can be cut at tip to adapt for smaller animals)	<ul style="list-style-type: none"> ALZET connection can be trimmed to achieve smaller lengths Catheter tip optimum for use with other small vessels (e.g., femoral, carotid, etc.) Retention beads at 13 and 35 mm from the tip facilitate anchoring to tissue Marked at 9 and 11 mm to simplify adaptation for <25 and 25-30 gram animals respectively
Mouse Jugular Catheter-Large Tip (0007702)	Polyurethane (PU)	~9.5 cm ~20 µl	44.5 mm of PU (0.84 mm OD; 0.36 mm ID) connected to a 50 mm ALZET connection (1.02 mm OD; 0.61 mm ID).	30+ grams (can be cut at tip to adapt for smaller animals)	<ul style="list-style-type: none"> ALZET connection can be trimmed to achieve smaller lengths Catheter tip optimum for jugular cannulation Retention beads at 13 and 35 mm from the tip facilitate anchoring to tissue Marked at 9 and 11 mm to simplify adaptation for <25 and 25-30 gram animals respectively

*All specialized catheters are packaged individually and supplied sterile (ETO sterilized). For catheter images, visit www.alzet.com.

Custom Catheter Design

Contact ALZET Technical Services at 800-692-2990 or alzet@durect.com to discuss your catheter requirements.



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