

Congratulations on your purchase of this Instech quartz-lined dual channel swivel for microdialysis with awake animals. We think you will find it to be the finest microdialysis swivel available anywhere.

The center channel is lined with 152 micron ID quartz tubing to minimize dead volume and prevent neurotransmitter oxidation. Dead volume is 1.4 μ l on the center channel and 18 μ l on the side.

This manual describes simple operating and maintenance procedures that will help keep your swivel in peak condition through hundreds of uses.

1.

USE

This precision swivel was designed to provide unlimited rotation for animals undergoing awake animal microdialysis. In most microdialysis set-ups the swivel is held over the animal container with a counter-balanced lever arm. This allows the swivel and tether system to respond to the animal's movements in 3 axes, minimizing forces on the probe.

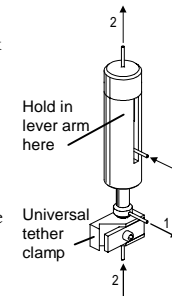
The universal clamp provided with the swivel is compatible with spring tethers from 0.08" to 0.2" OD. Use the 0.050" Allen wrench to attach the

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clamp to the bottom of the swivel and to tighten the V-block mount around the tether.

Typically, dialysate is infused on the side channel (1), removed through the quartz-lined center channel (2), and collected in a fraction collector. Attach microdialysis tubing to the bottom side and center channels and loop it down through the top of the spring tether.

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CLEANING AFTER EVERY USE

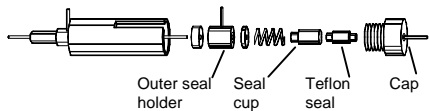
Microdialysis swivels must be cleaned immediately after each use. Swivels with plugged center channels cannot be repaired.

- Pull back on a syringe to suck water, alcohol, or a dilute nitric acid rinse back through both channels of the swivel. *Never force fluids through a dual channel swivel with a syringe or pump, as the pressure this generates will damage the seals.*
- Next, dry the insides by using the syringe to pull air through the swivel.
- You can autoclave these swivels, if desired.

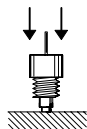
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TROUBLESHOOTING

Assuming you clean your swivel after each use, you will rarely need to disassemble it. In general, you should not attempt to repair a damaged dual channel swivel yourself unless you have ordered special tools and parts from Instech.



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An exception is a leaking center channel seal, which is relatively easy to fix. Unscrew the cap and remove only the white Teflon seal and seal cup, leaving the outer seal holder in place. Place the seal and seal cup combination into the cap and press it onto a flat surface as shown. This will force the seal against the interior of the cup and slightly reduce the diameter of the hole in the seal. Repeat this procedure for the other end of the seal. Test the seal for a snug fit by slipping it over the outlet tube. Refer to the diagram to reassemble the swivel.

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FOR MORE INFORMATION

If you have any questions about your swivel please don't hesitate to contact us. You can also visit our web site for information on our products, answers to technical questions, and tips from other users.

To complete your system, ask for information on other Instech microdialysis accessories:

- Precision microdialysis syringe pumps
- Counter-balanced lever arms
- Head block tethers
- Animal containers and other accessories.

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INSTECH

INSTRUCTION MANUAL
375/D/22QE Microdialysis Swivel

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