

Instech designs and manufactures systems for rodent infusion, sampling and oral dosing. They offer a wide range of solutions for rodent infusion and sampling with all needed accessories including catheters, Vascular Access Buttons™ and tethers, swivels & mounts, tubing, PinPorts™, and pumps.

INSTECH

Drug infusion

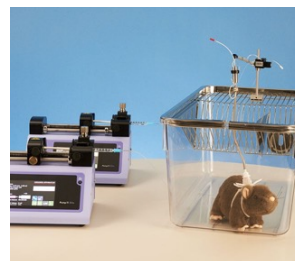
Recent product advances have changed the way we imagine laboratory animal infusion research. Dramatic improvements in patency, hassle-free connections and automation systems open new possibilities for continuous and intermittent rodent and large animal infusion studies.

Intermittent dose

Designed for doses of up to several minutes at a time, whether from a syringe pump or a manual bolus. In these cases direct injections could cause too much stress or trauma over the course of a study, but a continuous tethered system is overkill for the short duration of the dose. Catheterized animals with Vascular Access Buttons™ can be group housed using the protective cap.

Continuous infusion

A basic system includes a catheter, a Vascular Access Button™ for exteriorization, a swivel and tether system to protect the fluid line and allow the animal to move freely, and an infusion pump.



Infusion and sampling by two channels

Catheterization of two separate vessels demands using a two-channel system to collect manual blood samples outside the cage without touching the animal, all while infusing continuously through a swivel.

Self administration – unprecedented patency and ease-of-use for behavioral studies

Two-channel system for studying addiction to one or two compounds administered simultaneously.

Glucose clamping – precision in metabolic studies

Euglycemic clamp experiments combine multiple infusion lines with frequent blood samples. A reliable, low-stress two-channel system with a freely-moving animal is critical for high-quality data from this sensitive metabolic experiment.

Accessories



Vascular Access Buttons™

- One-, two-, three- and four channel



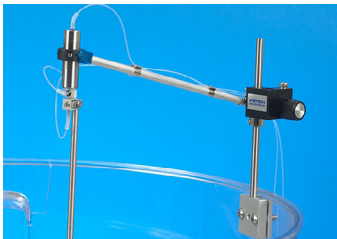
Catheters for mice and rats

- Tail vein
- Femoral vein and artery
- Jugular vein
- Carotid artery
- Bile duct
- Gastric
- Portal vein
- Intrathecal



Pumps

- OrchesTA™ syringe pump
- Harvard Apparatus's pumps



Swivels and mounts

- For isolator and metabolic cages
- Rodent enclosures
- Lever arms



PinPorts™, connectors, injectors

- Sterile, ready-to-use
- For MRI applications



Blood sampling

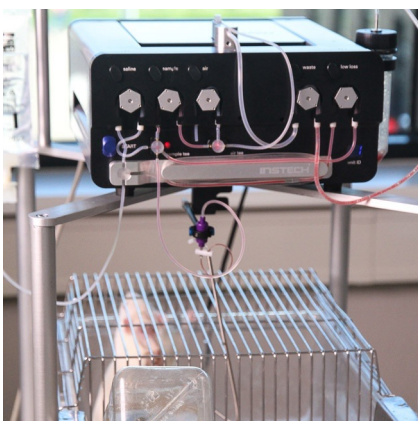
From manual sampling from a catheter to hands-free automated sampling through a tether with the ABS2, Instech offers a range of equipment for rodent blood sampling.

Microsampling

Taking repeated small blood samples from a mouse or rat using placed catheter in the jugular vein or carotid artery and connecting it to a transcutaneous skin button. This method is a refinement over stress-inducing tail snips, retro-orbital bleeds or other peripheral methods. Comfortable solution for group housed animals.

Hands off microsampling – sampling outside cage

The manual taking of blood samples without touching the animal after catheterizing the carotid artery or jugular vein and implanting the Vascular Access Button™. Ideal when stress could impact results.



Automated Blood Sampler (ABS2)

Elimination of handling stress, precise control over microsample volumes so that you can take a full pharmacokinetic profile from a single animal, increased throughput (one technician can run multiple studies simultaneously), and the ability to collect samples while you are not in the laboratory.

The sampler withdraws blood from a tethered freely-moving animal according to your programmed schedule, stores the samples in an integrated refrigerated fraction collector, and replaces the withdrawn volumes with IV fluid. You control and monitor sampling schedules, volumes and withdrawal rates for up to 12 animals from a central computer.

Bile sampling

Catheters in the bile duct and duodenum are connected to the ports of the Vascular Access Button™ so bile can flow in an extra-corporeal loop while the animal is in recovery or in transport. Instech offers systems with bile salt replacement in case of removing bile from the animal might impact the animal's health as well as with blood sampling.

