Infusion Dosing

Precision compound administration through controlled infusion.

Capabilities*:

- Flexible options tailored to short or long-term infusions.
- Applicable for both rodents and large animals.
- Available for pharmacokinetics, pharmacodynamics, and toxicology studies.
- Capable of handling a large number of animals simultaneously.

Locations: US, UK, and China

Timelines*: Dosing typically begins within 5 business days of receiving a purchase order. For rodents that we hold in-colony, treatment can start one day after the purchase order. Results, including bioanalysis data, are provided within 5 business days after the last dose.

Setup Options*:

- Infusion sites include tail, saphenous, jugular, femoral, and cephalic veins, with additional options available upon request.
- Infusion methods via needle, cannula, VAB (venous access buttons), or VAP (venous access port) can be selected based on infusion frequency and duration.
- Up to 2 compounds can be dosed simultaneously in a standard PK, or up to 5 compounds in a cassette PK setup.
- Continuous or repeated infusions plus blood sampling is available.

Example for Repeated Infusion in Rats via VAB (Fig 1.):

1. Animals are prepared by inserting a cannula into the jugular vein, followed by connection to a VAB.
2. The animals are housed in cages equipped with special lids and tethers to secure the infusion line.
3. For each treatment session, the infusion line is connected to the VAB, and the pump is programmed to deliver the compound at a specified dose volume and infusion rate.
4. Once the infusion is completed, the line is sealed off until the next treatment session.

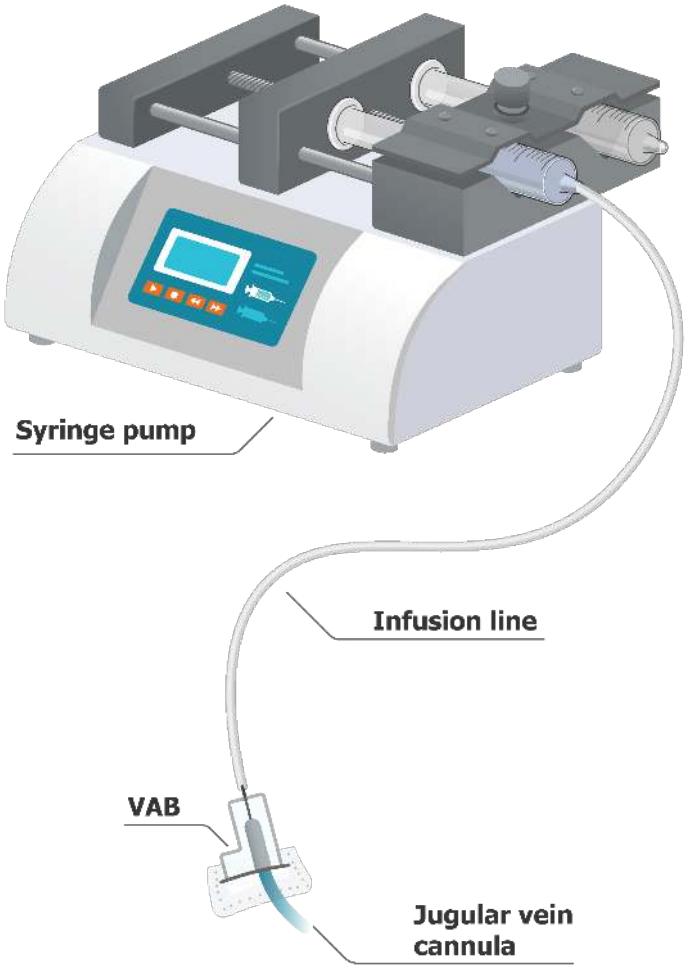

Fig. 1: Setup for an infusion study via a VAB

Image: Pharmaron

* Varies by animal species, study setup, and facility.

Why use Controlled Infusion?

Steady-State Concentration: Achieve a steady-state concentration of the compounds in the bloodstream, which is essential for studying pharmacokinetics without the fluctuations seen with bolus dosing.

Reduced Variability: Precise infusion rates result in more consistent and interpretable results.

Minimized Toxicity: Avoid peak concentrations that might cause adverse effects when delivering compounds with a narrow therapeutic window or potential toxicity.

Key Benefits

Controlled Infusion Rates: Maintain optimal compound concentrations with calibrated infusion pumps.

Flexibility: The study design and infusion procedure can be customized to meet client requirements.

Less Stress: For some setups, animals can remain in their home cage during infusion, reducing handling stress. Repeated needle sticks are avoided by using permanent infusion cannulas.

Optimal Blood Sampling: Blood loss is minimized when sampling is conducted via cannula.

Our team of seasoned professionals is ready to support your research projects.
Contact us today to find out how we can assist you.

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Instrumentation

PHD Ultra syringe pump

KD scientific syringe pump

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