



## PRECLINICAL PHARMACOLOGY

# Microsampling for in vivo pharmacokinetic studies

Through more than 15 years, Pipeline Biotech has serviced pharmaceutical companies combining extensive experience, high animal ethical standards, and a never-compromised dedication to customer service. As of 2014, Pipelines offerings have also included in-house, large animal studies.

Using the tail vessel technique for microsampling in rodent pharmacokinetic (PK) Pipeline offers to collect up to 6 blood samples per day from the same mouse, with a less invasive technique than for instance sublingual blood sampling. For larger animal species such as Minipigs or dogs, a catheter enables the collection of up to 12 samples per day.



With this technique scientists are able to obtain more samples from the same animal in a time series typically leading to statistically stronger data.

## Study design

The table below illustrates a significant reduction in the number of mice needed in a typical PK study design, comparing the standard sampling method with the microsampling method. The “one mouse, one time point” method have been common practice when designing PK studies. However, due to technology improvements within the bioanalysis field blood, volume is no longer a critical parameter, making microsampling an attractive alternative to the traditional sampling method both with respect to reduction of animals and with respect to a more favourable sampling profile.

Standard PK study design				
Group No.	Route	Time points	One mouse, one time point	Microsampling
1	IV	Pre-dose, 0.08h, 0.25h, 0.5h, 1h, 4h, 8h	N = 21	N = 3
2	PO	Pre-dose, 0.25h, 0.5h, 1h, 4h, 8h, 24h	N = 21	N = 3

When using microsampling in a mice PK study it is possible to retrieve up to 30 µL at each time point. The blood will be collected in either microvettes or capillary tubes and plasma or serum will be separated subsequently.

Please contact us for further details and to learn how we will advance your preclinical research program [info@pipeline-biotech.dk](mailto:info@pipeline-biotech.dk)



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