

Background

Since the introduction of the first automated blood sampler (ABS) nearly 20 years ago, techniques on animal connection methods have progressed. In the early years of ABS usage, the dacron button and Covance harness were the most commonly used connection methods. Partially driven by the use of pre-operated animals – up till now mainly in the US – and global standardization of (surgical) techniques, new animal connection methods were developed; e.g. the vascular access harness (VAH, Instech Solomon, US). During our ABS customer service visits, we have learned that customers are investigating the use of these new animal connection methods. Up till now customers have been reluctant to change their connection methods because of the ABS system settings change. With this document VeruTech would like to inform you about the procedure for changing the ABS system settings. In addition we would like to inform you that the same ABS system setting change applies to a change of catheter¹ as well.

System settings

We would like to point out that a properly calibrated tubing system is a basic requirement for a change of system settings. Our service tool with pressure monitoring allows us to review the flow quality and find errors not even the most trained eye can see. VeruTech offers to do a complete system calibration and change of settings and a full evaluation of the sampling process including a dilution measurement on-site with the customer.

See list below for the appropriate system settings for the Instech VAH; the yellow tube can be changed by the customer him- or herself.

InfuseAnimalRate (µl/s):

Change to 20µl/s

PressureLimitSample (kPa):

Make sure to have a relevant pressure limit depending on which blood vessel you'll use.
On Carotid Artery use -3kPa
On Jugular Vein use -5kPa

RefillAnimalRate (µl/s):

On Carotid Artery use 12µl/s
On Jugular Vein use 8µl/s

SampleExtraVolume (µl):

Use the value of 50µl/s

WasteVolume (µl):

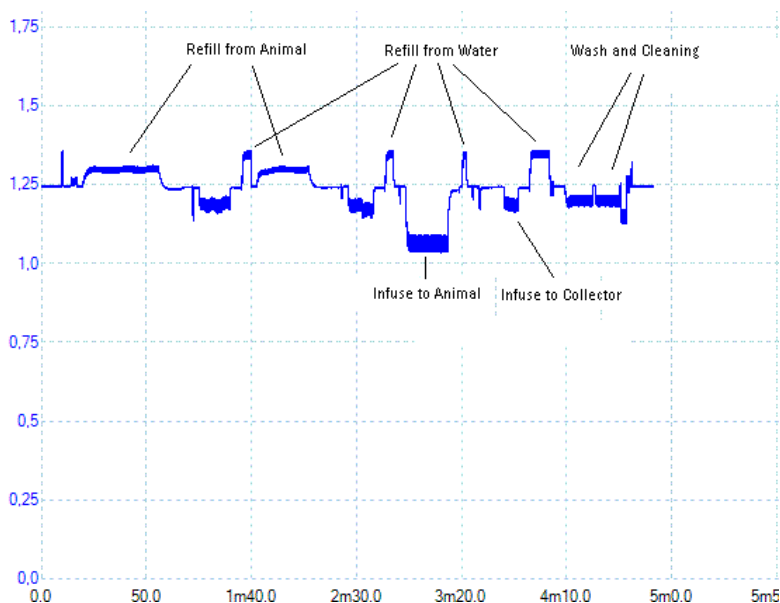
Standard value of 30µl/s

CatheterSample (µl):

Total volume of the catheter inside the animal + VAH.

TubingYellow (µl):

Order the shorter yellow tube from VeruTech AB and use valve position 2 on the balance arm (MCLA) on the cage.
VeruTech Art. No: 227786-08



These values are accurate when having a sample volume of 100-200µl.

¹ Together with the progress in animal connection, catheter have changed e.g. round tip, heparin coated etc (see reference list for more information)