
 <b>University of Zurich</b> <sup>UZH</sup> Institute of Laboratory Animal Sciences	<b>Standard Operating Procedure</b>  <b>SOP</b>	Page 1 of 2
Date: 27.07.2022	<b>Intravenous injection of mice</b> i.v. Injection	LTK-TRT-7-EN Version: C
<b>This SOP replaces:</b>	Date: 21.08.19 Version: B	
<b>Reason for Change:</b>	Superfluous boxes were removed	
<b>Related SOPs:</b>		
<b>Indication of Use:</b>	Bringing cells or substances in solution into the blood of mice	
<b>Aim of SOP:</b>	This protocol describes how cells or solutions are injected intravenously (i.v.) through the tail vein of mice	
<b>Distribution:</b>	<ol style="list-style-type: none"><li>1. Original: Thorsten Buch</li><li>2. Copy: Animal facilities</li><li>3. Intranet</li></ol>	
<b>Attachments:</b>		
Generated at: 26.07.22	Checked and approved at: 27.07.22	
by: Vasileia Kalaitzaki	by: Thorsten Buch	

**Responsible Persons:** Researcher with Module 1 after registration on animal license including EAE protocol

**Min/Max amount:**

Maximum injection volume is 5  $\mu$ l/g mouse = 100  $\mu$ l/20 g = 5 ml/kg  
Exemptions for experimental reason must be approved in respective animal permits

Reference: [https://www.gv-solas.de/wp-content/uploads/2017/03/2017\\_substance\\_administration.pdf](https://www.gv-solas.de/wp-content/uploads/2017/03/2017_substance_administration.pdf)

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<b>Date: 18.02.2022</b>	<b>Intravenous injection of mice</b> <b>i.v. Injection</b>	<b>LTK-TRT-7-EN</b> <b>Version: C</b>

**Machine:**  
Laminar flow/changing station

**Material:**

1. 1 ml syringe/insulin syringe
2. 26-30 gauge needle
3. restrainer
4. water in beaker at max 42 °C

**Safety:**  
Rules for the respective animal room have to be followed

**Method Description:**

1. Warm the tail of the mouse in max 42 °C warm water.
2. Restrain the mouse in the physical restrainer device. If mouse cannot be restrained in the device, anaesthetize the mouse.
3. Rotate the tail slightly to visualize the vein.
4. Firmly hold the tail between the thumb and forefinger of your hand that does not hold the syringe. Hold the tail above (proximal to) the injection site.
5. Insert needle (26-30 gauge) into the vein at a slight angle. DO NOT aspirate!
6. Inject slowly, watching for clearing of the lumen (to ensure you are injecting into the vein). You should see the vein become clear as the fluid replaces the blood.
7. Withdraw needle and apply slight pressure on site of injection.
8. Return the animal to the cage after visual check of the injection site

**Criteria for approving outcome:**  
all liquid injected without complications

**Documentation:**  
The experiment has to be recorded as required by the respective animal permit. Also, an entry in the lab book has to be made.

**Problem management:**  
In case of emergency contact supervisor, lab head or vet.

SOP-LTK-TRT-7-C-EN iv injection.docx