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ExiTron™ MyoC 8000

CT contrast agent for pre-clinical imaging

1 vial (5 x 125 µL injections) # 130-095-701
5 vials (25 x 125 µL injections) # 130-095-702

Contents

1. Description

Components **1 mL ExiTron™ MyoC 8000,**
CT contrast agent
or
5 × 1 mL ExiTron™ MyoC 8000,
CT contrast agent.

Capacity **5 × 125 µL injections**
or
25 × 125 µL injections.

Product format ExiTron MyoC 8000 is supplied as a sterile isotonic suspension containing 210 mg iodine per mL.

Appearance Opaque white liquid.

Storage Store at 2–8 °C. Do not freeze. The expiration date is indicated on the vial label.

For laboratory and animal research use only. Warning: Not for human or animal therapeutic or diagnostic use. Make sure to comply with all laws and regulations governing research on animals.

1.1 Background information

ExiTron MyoC 8000 is an iodine-based nanoparticulate contrast agent specifically formulated for pre-clinical computed tomography (CT).
It shows strong X-ray absorption due to the high iodine load of the particles.
Upon intravenous injection, ExiTron MyoC 8000 circulates in the blood stream for a prolonged time. It strongly accumulates in the myocardium and is mainly excreted via the liver and spleen.

1.2 Applications

ExiTron MyoC 8000 is indicated for use in CT of small animals, for example mice, to facilitate the visualization of vascular structures as well as the myocardium. Examples include functional cardiac imaging, visualization of myocardial structures and quantification of infarct size.

1.3 Physico-chemical properties

Mean hydrodynamic diameter: 300 nm.

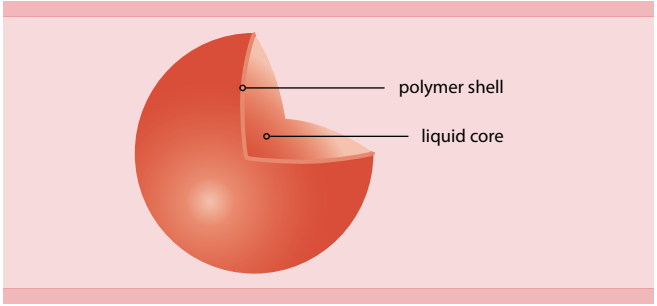

Figure 1: Schematic diagram of an ExiTron MyoC 8000 nanoparticle.

1.4 Requirements

- Sterile syringes and needles (27–30 G)
  Note: To allow sufficient volume for 5 × 125 µL injections per vial, the syringe/needle dead volume should be kept below 70 µL.
  Tip: Use insulin or tuberculin syringes.
- 70 % ethanol

2. Protocol

2.1 Preparation

- Read the entire protocol before starting.
  Tip: For optimum device settings perform initial studies in a suitable imaging phantom.
- The contrast agent is ready for injection as provided.
- For a mouse weighing 20–35 g the typical injection volume is 125 µL corresponding to a dose of 1050 mg iodine/kg body weight (for a 25 g mouse).
  Note: Standard animal-handling procedures and local regulations must be followed.

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2.2 Injection

- Vortex the vial to ensure thorough mixing.
- Disinfect the septum with 70% ethanol. Let septum dry.
- Warm the mouse tail to dilate the veins and enhance their visibility.
- Inject ExiTron MyoC 8000 (typically 125 µL) slowly via the lateral tail vein of the mouse.

  Note: ExiTron MyoC 8000 contains no preservatives. Avoid microbial contamination and discard any unused material after 24 hours.

2.3 Imaging

- Follow the imaging protocol as recommended by the manufacturer of your imaging system.
- Taking a pre-contrast image is recommended.
- For vascular as well as functional cardiac studies, imaging should be performed immediately after injection.
- Prior to imaging of the myocardium, a waiting period of 4 h is recommended.

Find examples of ExiTron MyoC 8000-enhanced CT images at **www.viscover.berlin**.

3. References

1. Kraupner, A. *et al.* (2014) *In vivo* evaluation of a myocardial infarction in small animals using a novel CT blood pool imaging agent. World Molecular Imaging Congress Meeting, Seoul, South Korea.
2. Sawall, S. *et al.* (2016) CT imaging of myocardial infarction in mice using a novel iodine-based contrast agent. World Molecular Imaging Congress Meeting, New York, USA.
3. Sawall, S. *et al.* (2017) *In Vivo* Quantification of Myocardial Infarction in Mice using Micro-CT and a Novel Blood Pool Agent. Contrast Media Mol Imaging. https://doi.org/10.1155/2017/2617047.

4. Related products

ExiTron™ U	# 130-095-142, # 130-095-143
ExiTron™ V	# 130-095-283, # 130-095-284
ExiTron™ P	# 130-095-144, # 130-095-145
ExiTron™ nano 6000	# 130-095-146, # 130-095-147
ExiTron™ nano 12000	# 130-095-698, # 130-095-700
ExiTron™ ultra 18000	# 130-095-709, # 130-095-710
ExiTron™ BAT	# 130-095-707, # 130-095-708

A comprehensive product portfolio for the imaging modalities MRI, CT, US, OI, SPECT, and PET is available at **www.viscover.berlin**.

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