

1 vial (5 x 100 µL injections)

130-095-705

5 vials (25 x 100 µL injections)

130-095-706

Contents

1. Description

- 1.1 Background information
- 1.2 Applications
- 1.3 Physico-chemical properties

1.4 Requirements

2. Protocol

- 2.1 Preparation
- 2.2 Injection
- 2.3 Imaging

3. References

4. Related products

1. Description

Components 850 µL GadoSpin™ V,
MRI agent (Gd-EOB-DTPA)
or
5 x 850 µL GadoSpin™ V,
MRI agent (Gd-EOB-DTPA).

Capacity 5 x 100 µL injections
or
25 x 100 µL injections.

Product format GadoSpin V is supplied as a 50 mM gadolinium sterile isotonic solution.

Appearance Clear, colorless liquid.

Storage Store protected from light 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

GadoSpin V is a gadolinium-based imaging agent of low molecular weight specifically formulated for pre-clinical magnetic resonance imaging (MRI).

GadoSpin V increases the signal intensity in T_1 -weighted MRI due to a shortening of the spin-lattice relaxation time (T_1).

After intravenous injection, GadoSpin V accumulates in healthy liver tissue enabling detection of focal liver lesions. The agent is excreted via both the renal and hepatobiliary route.

1.2 Applications

GadoSpin V is indicated for use in MRI of small animals, for example mice, to facilitate the visualization of the liver. Examples include detection of focal liver lesions and metastases.

1.3 Physico-chemical properties

Molecular weight	Relaxivity (37 °C, 1.5 T) in plasma	in blood
726 g mol ⁻¹	$r_1 = 7 \text{ L mmol}^{-1} \text{ s}^{-1}$ $r_2 = 9 \text{ L mmol}^{-1} \text{ s}^{-1}$	$r_1 = 7 \text{ L mmol}^{-1} \text{ s}^{-1}$

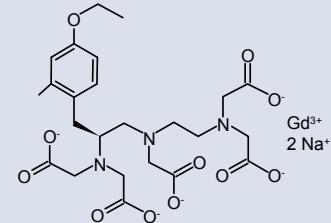


Figure 1: Structural formula of Gd-EOB-DTPA Disodium.

1.4 Requirements

- ⌚ Sterile syringes and needles (27–30 G)

Note: To allow sufficient volume for 5 x 100 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 imaging agent is ready for injection as provided.

- ⌚ For a mouse weighing 20–30 g the typical injection volume is 100 µL corresponding to a dose of 200 µmol Gd/kg body weight (for a 25 g mouse).

Note: Standard animal-handling procedures and local regulations must be followed.

2.2 Injection

- ⌚ Disinfect the septum with 70% ethanol. Let septum dry.
- ⌚ Warm the mouse tail to dilate the veins and enhance their visibility.
- ⌚ Inject GadoSpin V (typically 100 µL) via the lateral tail vein of the mouse.

Note: GadoSpin V contains no preservatives. Avoid microbial contamination and discard any unused material after 24 hours.

2.3 Imaging

- ⌚ Imaging can be performed on a multitude of devices at all commonly used field strengths including high-field MRI.
- ⌚ GadoSpin V is particularly suited for T₁-weighted MRI but can also be detected by T₂- and T₂^{*}-weighted sequences.
- ⌚ Taking a pre-contrast image is recommended.
- ⌚ Prior to liver imaging a waiting period of 30-60 minutes is recommended.

Find examples of GadoSpin V-enhanced MR images at www.viscover.berlin.

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3. References

1. Kiryu, S. *et al.* (2009) Evaluation of gadoxetate disodium as a contrast agent for mouse liver imaging: comparison with gadobenate dimeglumine. *J. Magn. Reson. Imaging* 27(1): 101-107.
2. Freimuth, J. *et al.* (2010) Application of magnetic resonance imaging in transgenic and chemical mouse models of hepatocellular carcinoma. *Molecular Cancer* 9: 94.
3. Yang, L. *et al.* (2020) T1 Mapping on Gd-EOB-DTPA-enhanced MRI for the prediction of oxaliplatin-induced liver injury in a mouse model. *J. Magn. Reson. Imaging* 53: 896-902.

4. Related products

GadoSpin TM P	# 130-095-136, # 130-095-137
GadoSpin TM F	# 130-095-162, # 130-095-163
GadoSpin TM D	# 130-095-164, # 130-095-165
GadoSpin TM M	# 130-095-134, # 130-095-135
FeraSpin TM R	# 130-095-138, # 130-095-139
FeraSpin TM XS	# 130-095-140, # 130-095-141
FeraSpin TM S	# 130-095-166, # 130-095-167
FeraSpin TM M	# 130-095-168, # 130-095-169
FeraSpin TM L	# 130-095-170, # 130-095-171
FeraSpin TM XL	# 130-095-172, # 130-095-173
FeraSpin TM XXL	# 130-095-174, # 130-095-175
FeraSpin TM T	# 130-095-703, # 130-095-704

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