

Native Bovine Hemoglobin Glutamer

Cat. No. Hemoglobin Glutamer-01B **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Hemoglobin Glutamer contains polymerized hemoglobin of bovine origin.
Species	Bovine
Source	Bovine
Description	Hemoglobin Glutamer is a cell-free polymerized hemoglobin solution that not only carries oxygen in the plasma, but also enhances the ability of native red blood cells to take up and off-load oxygen. Studies in an artificial capillary model suggest that the free hemoglobin molecules in the plasma facilitate the diffusion of oxygen into the pulmonary capillary blood more rapidly and more efficiently than normal diffusion across the alveolarcapillary barrier and the red blood cell membrane. Hemoglobin Glutamer is manufactured from a plentiful and well-controlled source material, bovine hemoglobin. Only cattle from the qualified farms are utilized as donors, and an extensive herd-management programme ensures that only certified disease-free animals less than 30 months of age are used to provide the hemoglobin. The extensive extraction and purification process used in production has been validated for the removal of potential contaminants including plasma proteins, red blood cell stroma, endotoxin, bacteria, viruses and the agents that are thought to cause transmissible spongiform encephalopathies such as bovine spongiform encephalopathy (BSE) and variant Creutzfeldt Jakob disease (vCJD). This process produces a sterile, pyrogen-free balanced salt solution containing glutaraldehyde cross-linked bovine hemoglobin polymers, which range in size from 65 to 500 kDa.

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Form	Sterile, clear dark purple solution. It contains 130 mg/ml polymerized hemoglobin of bovine origin in a modified Lactated Ringer's Solution containing Water for Injection 100 g/dL, NaCl 113 mmol/L, KCl 4 mmol/L, CaCl ₂ ·2H ₂ O 1.4 mmol/L, NaOH 10 mmol/L, Sodium Lactate 27 mmol/L, N-acetyl-L-cysteine 200 mg/dL with a pH of 7.6 - 7.9. It contains ≤ 3.5 µg/mL free-glutaraldehyde.
Molecular Mass	It is a distribution of hemoglobin polymers with less than 5% of the hemoglobin as unstabilized tetramers, approximately 50% has a molecular weight between 65 and 130 kD.
Endotoxin	≤ 0.25 EU/mL
Applications	Hemoglobin Glutamer is indicated for the treatment of anemia by increasing systemic oxygen content (plasma hemoglobin concentration) and improving the clinical signs associated with anemia, regardless of the cause of anemia (hemolysis, blood loss, or ineffective erythropoiesis). We have further expand Hemoglobin Glutamer's application to ischemia and/or hypoxia, such as margin organ machine perfusion, pulmonary fibrosis treatment, chemosensitization of solid cancer, etc.
Usage	Remove overwrap prior to use. Use within 24 hours. Hemoglobin Glutamer should be administered using aseptic technique via a standard intravenous infusion set and catheter. As with any intravenous fluid administration, Hemoglobin Glutamer should be warmed to 37 centigrade prior to administration. Do not microwave. Do not overheat. Do not administer with other fluids or medicinal products concurrently via the same infusion set.
Storage	Store at room temperature or refrigerated (2-30 centigrade). Do not freeze. Use within 24 hours of removing overwrap. Do not use after the expiry date stated on the label.
Concentration	130 mg/mL

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Storage Buffer

Modified Lactated Ringer's Solution containing Water for Injection 100 g/dL, NaCl 113 mmol/L, KCl 4 mmol/L, CaCl₂·2H₂O 1.4 mmol/L, NaOH 10 mmol/L, Sodium Lactate 27 mmol/L, N-acetyl-L-cysteine 200 mg/dL, pH 7.6 - 7.9.

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