

LIQUIVENT® LUNG LAVAGE

Liquivent is intended to be used as an aid in removing debris, secretions, and foreign matter from the lungs via bronchoalveolar lavage (BAL).

OriGen
BIOMEDICAL

RADIOPAQUE PERFLUBRON FOR LUNG LAVAGE

Removal of aspirated debris or liquids from the lungs is especially difficult. Saline lavage is quite painful for the patient and has numerous drawbacks, including reducing PaO_2 , removing surfactant, eliciting a cough reflex, and is ineffective in removing debris from the lungs. Liquivent, a perfluorocarbon (PFC) compound liquid (also known as perfluorooctylbromide or Perflubron or PFOB), has notable advantages as a lavage medium that may reduce the risk of these known issues.

Perfluorocarbon (PFC) liquids are water-clear, very dense, and low-viscosity. PFCs are immiscible with both water and lipids. Due to the density, the PFCs penetrate to the lowest levels in the lung and displace most solids and liquids. This causes any debris, secretions, or foreign matter to float to the top of the meniscus, where it is easily removed.

ADVANTAGES OF LIQUIVENT LUNG LAVAGE

Bioinert: PFOBs are minimally absorbed⁶ and have no deleterious histological cellular or biochemical effects¹.

Buoyancy: Most liquids and solids float on top of PFOBs due to their high density and low viscosity, allowing toxic, damaging exudates, as well as infectious material, to float to the top of the PFOB, where they can be removed using suction⁷.

Hydrophobic: PFCs do not mix with water, inhaled liquids, or solids.

Respiratory: Does not block oxygen transfer during lavage⁸, improves lung function, and also reduces inflammation⁹.

OUR QUALITY STANDARDS

A Certificate of Analysis (CoA) is included with each Perflubron product. OriGen's Liquivent is CE marked. OriGen is certified to ISO 13485:2016, and all products are manufactured to GMP guidelines.



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OriGen Biomedical™ supplies a pharmaceutical-grade perfluorocarbon compound called Perflubron (PFOB). Perflubron's chemical name is perfluorooctyl bromide and it is radiopaque (opaque on x-ray).

Perflubron (PFOB) has been extensively studied in both the lungs and circulation. PFOB is bioinert, minimally absorbed, and has no deleterious histological cellular or biochemical effects¹⁰. PFOB molecules are too large to be metabolized⁵ and are therefore non-reactive in the respiratory or circulatory system. In addition, due to its high vapor pressure, Perflubron evaporates quickly¹, making vigorous attempts to remove the liquid from the lungs virtually unnecessary⁷.

Clinical studies have shown that Perflubron is eliminated from the lungs primarily by evaporation during normal respiration, with radiographic clearance of most of the PFCs by 48 hours. Trace amounts of PFOB are detectable via X-ray, but has no documented health effects¹. PFOB use in the lungs enhances surfactant phospholipid production². Instillation of Perflubron into the lungs was found to diminish oxidative damage to injury-prone tissues compared to standard saline usage/procedures³. And when used with exogenous surfactant, PFOB actually improved pulmonary gas exchange after meconium aspiration⁴.

TECHNICAL INFORMATION

LIQUIVENT: RADIOPAQUE PERFLUBRON

PART CODE	VOLUME (cc)	CASE QUANTITY	STOCK/NON-STOCK
PFB-3	3cc in 10cc vial	12	Non-Stock
PFB-50	50cc in 50cc syringe	5	Stock

ORDERING INFORMATION

Supplied sterile, non-pyrogenic, individually packed, for single use only. To place an online order, [please fill out this form](#). **For research use only in the United States.**

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