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Section 1-Product Information

Product name	Luteinizing Hormone Releasing Hormone (LH-RH), human
Product Cat. No.	RP11937

Section 2-Composition / Information on Ingredients

Substance/Preparation:	Substance
Ingredient Name	Luteinizing Hormone Releasing Hormone (LH-RH), human
CAS No.	71447-49-9
SARA 313	No
Formula	C ₅₅ H ₇₅ N ₁₇ O ₁₃

Section 3- Hazards Identification

Emergency Overview

	Toxic
	May impair fertility.
HMIS Rating	
Health	0*
Flammability	0
Reactivity	0
NFPA Rating	
Health	0
Flammability	0
Reactivity	0

*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

Section 4- First Aid Measures

Oral Exposure	If swallowed, wash out mouth with water provided person is conscious. Call a physician.
Inhalation Exposure	If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.
Dermal Exposure	In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.
Eye Exposure	In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5- Fire Fighting Measures

Flash Point	Not available
Autoignition Temp	Not available
Flammability	Not available
Extinguishing Media	
Suitable	Carbon dioxide, dry chemical powder, or appropriate foam. Water spray
Fire Fighting	
Protective Equipment	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s)	Emits toxic fumes under fire conditions.

Section 6- Accidental Release Measures

Procedure(s) of Personal Precaution(s)	Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.
Methods for Cleaning up	Sweep up, place in a bag and hold for waste disposal. Avoid

raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7-Handling and Storage

Handling	
User Exposure	Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.
Storage	
Suitable	Keep tightly closed
Storage at -20°C	

Section 8-Exposure Controls/Personal Protection Equipment

Engineering Controls	Safety shower and eye bath. Mechanical exhaust required.
Personal Protective equipment	
Respiratory	Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks.
Hand	Protective gloves
Eye	Chemical safety goggles
General Hygiene Measures	Wash thoroughly after handling

Section 9- Physical and Chemical Properties

Appearance	
Physical State	White powder
Property	
Molecular Weight	1182.29 AMU
pH	Not available
BP/BP Range	Not available
MP/MP Range	Not available
Freezing Point	Not available
Vapor Pressure	Not available
Vapor Density	Not available
Saturated Vapor Conc.	Not available
SG/Density	Not available
Bulk Density	Not available
Odor Threshold	Not available
Volatile%	Not available
VOC Content	Not available
Water Content	< 10 %
Solvent Content	Not available
Evaporation Rate	Not available
Viscosity	Not available
Surface Tension	Not available
Partition Coefficient	Not available
Decomposition Temp.	Not available
Flash Point	Not available
Explosion Limits	Not available
Flammability	Not available
Autoignition Temp	Not available
Refractive Index	Not available
Optical Rotation	Not available
Miscellaneous Data	Not available
Solubility	Solubility in Water: 25 mg/ml H ₂ O clear, very faintly yellow

Section 10- Stability and Reactivity

Stability	
Stable	Stable
Materials to Avoid	Strong oxidizing agents
Hazardous Decomposition Products	
Hazardous Decomposition Products	Carbon monoxide, Carbon dioxide, Nitrogen oxides

Hazardous Polymerization
Hazardous Polymerization Will not occur

Section 11- Toxicological Information

Route of Exposure	
Skin Contact	May cause skin irritation
Skin Absorption	May be harmful if absorbed through the skin
Eye Contact	May cause eye irritation.
Inhalation	Material may be irritating to mucous membranes and upper respiratory tract, May be harmful if inhaled.
Ingestion	May be harmful if swallowed
Signs and Symptoms of Exposure	May have actions similar to luteinizing hormone releasing hormone (LH-RH) and gonadotropin releasing hormone (GN-RH) which are the key mediators in the neuroregulation of the secretion of gonadotropins, luteinizing hormone (LH) and follicle stimulating hormone (FSH). LH-RH can modify sexual behavior by regulating plasma gonadotropin and sex steroid levels.
Toxicity Data	
Oral	Rat > 3000 mg/kg LD50
Intravenous	Rat 154 mg/kg LD50
Subcutaneous	Rat >2 mg/kg LD50
Intravenous	Rat 203 mg/kg LD50
Oral	Mouse > 4000 mg/kg LD50
Intravenous	Mouse 303 mg/kg LD50
Subcutaneous	Mouse >2 mg/kg LD50
Intravenous	Mouse 416 mg/kg LD50
Chronic Exposure - Teratogen	
Species	Rabbit
Dose	260 ug/kg
Route of Application	Intravenous
Exposure Time	(6-18D PREG)
Result	Effects on Embryo or Fetus: Fetal death.
Chronic Exposure - Reproductive Hazard	
Species	Rat
Dose	54 mg/kg
Route of Application	Intravenous
Exposure Time	(17-22D PREG/21D POST)
Result	Effects on Newborn: Live birth index (# fetuses per litter; measured after birth). Effects on Newborn: Stillbirth. Effects

on Newborn: Physical.

Species	Rat
Dose	5400 ug/kg
Route of Application	Intravenous
Exposure Time	(17-22D PREG/21D POST)
Result	Maternal Effects: Ovaries, fallopian tubes. Maternal Effects: Uterus, cervix, vagina. Maternal Effects: Parturition.

Species	Rat
Dose	5400 ug/kg
Route of Application	Intravenous
Exposure Time	(17-22D PREG/21D POST)
Result	Effects on Newborn: Viability index (e.g., # alive at day 4 per # born alive). Effects on Newborn: Growth statistics (e.g., reduced weight gain). Effects on Newborn: Physical.

Species	Rat
Dose	540 ug/kg
Route of Application	Intravenous
Exposure Time	(17-22D PREG/21D POST)
Result	Effects on Newborn: Live birth index (# fetuses per litter; measured after birth).

Species	Rabbit
Dose	26 mg/kg
Route of Application	Intravenous
Exposure Time	(6-18D PREG)
Result	Maternal Effects: Uterus, cervix, vagina. Maternal Effects: Ovaries, fallopian tubes.

Species	Rabbit
Dose	26 mg/kg
Route of Application	Intravenous
Exposure Time	(6-18D PREG)
Result	Effects on Fertility: Litter size (e.g.; # fetuses per litter; measured before birth). Effects on Embryo or Fetus: Fetal death.

Section 12- Ecological Information

No data available.

Section 13- Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation	Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.
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Section 14- Transport Information

DOT	
Proper Shipping Name	None
Non-Hazardous for Transport	This substance is considered to be non-hazardous for transport.
IATA	
Non-Hazardous for Air Transport	Non-hazardous for air transport

Section 15- Regulatory Information

EU Additional Classification	
Symbol of Danger	T
Indication of Danger	Toxic
R	60
Risk Statements	May impair fertility.

S	53-45
Safety Statements:	Avoid exposure - obtain special instructions before use. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
US Classification and Label Text	
Indication of Danger	Toxic
Risk Statements	May impair fertility.
US Statements	Avoid exposure - obtain special instructions before use. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
United States Regulatory information	
SARA Listed	No
Canada Regulatory information	
WHMIS Classification	This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL	No
NDSL	No

Section 16- Other Information

GenScript corporation MSDS is believed to be correct but only used as a guide for experienced personnel, GenScript shall not be held liable for any damage resulting from the handling or from contact with the above product.