

Certificate of Analysis

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Product Name: Nafarelin
CAS Number: 76932-56-4

Catalog No.: 2544 **Batch No.:** 2

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₆₆H₈₃N₁₇O₁₃
Batch Molecular Weight: 1322
Physical Appearance: White lyophilised solid
Net Peptide Content: 80%
Counter Ion: Trifluoroacetate
Solubility: Soluble to 1 mg/ml in water
Storage: Desiccate at -20°C
Peptide Sequence: Glp-His-Trp-Ser-Tyr-D-2Nal-Leu-Arg-Pro-Gly-NH₂

2. ANALYTICAL DATA

HPLC: Shows >95% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical		Actual		Amino Acid Theoretical		Actual	
Ala				Lys			
Arg	1.00	1.02	Met				
Asx			Phe				
Cys			Pro	1.00	0.98		
Glx			Ser	1.00	1.96		
Gly	1.00	1.00	Thr				
His	1.00	1.11	Trp				
Ile			Tyr	1.00	1.02		
Leu	1.00	0.96	Val				

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Product Name: Nafarelin
CAS Number: 76932-56-4**Catalog No.:** 2544 **Batch No.:** 2**Description:**

Synthetic gonadotropin-releasing hormone (GnRH) agonist that stimulates secretion of luteinizing hormone (LH) and follicle-stimulating hormone (FSH). Repeated administration causes desensitization of pituitary GnRH receptors resulting in inhibition of gonadotropin release and decreased steroid hormone synthesis. Induces atrophy and regression of experimentally induced endometriosis in rat and shrinks hypertrophic tissue in benign prostatic hyperplasia.

Physical and Chemical Properties:Batch Molecular Formula: C₆₆H₈₃N₁₇O₁₃

Batch Molecular Weight: 1322

Physical Appearance: White lyophilised solid

Peptide Sequence:Glp-His-Trp-Ser-Tyr-D-2Nal-Leu-Arg-Pro-Gly-NH₂**Storage:** Desiccate at -20°C**Solubility & Usage Info:**

Soluble to 1 mg/ml in water

This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Net Peptide Content: 80% (Remaining weight made up of counterions and residual water).**Counter Ion:** Trifluoroacetate**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Peptides in solution are much less stable than in lyophilized form. This is especially true for peptides whose sequences contain amino acids such as Cys, Met, Trp, Asn, Gln, and N-terminal Glu.

Therefore we recommend storing peptides in solution for as short a time as possible. Avoid repeated freeze thaw cycles by dividing the peptide solution into aliquots and storing the aliquots at -20°C. Any portion of an aliquot unused after thawing should be discarded.

Peptides stored in solution can occasionally be susceptible to bacterial degradation. We recommend using sterile solutions or passing the peptide solution through a 0.2 µm filter to remove potential bacterial contamination whenever possible.

References:

Mizutani *et al* (1995) Effect of gonadotrophin-releasing hormone agonists, nafarelin, buserelin, and leuprolide, on experimentally induced endometriosis in the rat. *Int.J.Fertil.Menopausal Stud.* **40** 106. PMID: 7599657.

Chrisp and Goa (1990) Nafarelin. A review of its pharmacodynamic and pharmacokinetic properties, and clinical potential in sex hormone-related conditions. *Drugs* **39** 523. PMID: 2140979.

Letassy *et al* (1990) Nafarelin acetate: a gonadotrophin-releasing hormone agonist for the treatment of endometriosis. *DICP* **24** 1204. PMID: 2151003.

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