

# Certificate of Analysis

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**Product Name:** Mastoparan

**Catalog No.:** 1192

**Batch No.:** 12

CAS Number: 72093-21-1

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>70</sub>H<sub>131</sub>N<sub>19</sub>O<sub>15</sub>  
**Batch Molecular Weight:** 1479  
**Physical Appearance:** White lyophilised solid  
**Net Peptide Content:** 72.1%  
**Counter Ion:** TFA  
**Solubility:** Soluble to 1 mg/ml in water  
**Storage:** Desiccate at -20°C  
**Peptide Sequence:** Ile-Asn-Leu-Lys-Ala-Leu-Ala-Ala-Leu-Ala-Lys-Lys-Ile-Leu-NH<sub>2</sub>

## 2. ANALYTICAL DATA

**HPLC:** Shows 95.8% purity  
**Mass Spectrum:** Consistent with structure

## 3. AMINO ACID ANALYSIS DATA

Amino Acid		Theoretical	Actual	Amino Acid		Theoretical	Actual
Ala		4.00	3.91	Lys		3.00	3.08
Arg				Met			
Asx		1.00	0.94	Phe			
Cys				Pro			
Glx				Ser			
Gly				Thr			
His				Trp			
Ile		2.00	2.03	Tyr			
Leu		4.00	4.04	Val			

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**Product Name:** Mastoparan

**Catalog No.:** 1192

**Batch No.:** 12

CAS Number: 72093-21-1

**Description:**

Peptide activator of G<sub>i</sub> and G<sub>o</sub>.

**Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>70</sub>H<sub>131</sub>N<sub>19</sub>O<sub>15</sub>

Batch Molecular Weight: 1479

Physical Appearance: White lyophilised solid

**Peptide Sequence:**

Ile-Asn-Leu-Lys-Ala-Leu-Ala-Ala-Leu-Ala-  
Lys-Lys-Ile-Leu-NH<sub>2</sub>

**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:** 72.1% (Remaining weight made up of counterions and residual water).

**Counter Ion:** TFA

**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:**

**Longland *et al*** (1999) The mechanism of inhibition of the Ca<sup>2+</sup>-ATPase by mastoparan. *J.Biol.Chem.* **274** 14799. PMID: 10329678.

**Higashijima and Ros** (1991) Mapping of the mastoparan-binding site on G proteins. Cross-linking of [<sup>125</sup>I-Tyr<sup>3</sup>, Cys<sup>11</sup>]mastoparan to G<sub>o</sub>. *J.Biol.Chem.* **266** 12655. PMID: 1905730.

**Raynor *et al*** (1991) Membrane interactions of amphiphilic polypeptides mastoparan, melittin, plymixin B and cardiotoxin. *J.Biol.Chem.* **266** 2753. PMID: 1847132.

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