

Melanotan II

Melanotan II is a synthetic cyclic heptapeptide analogue of alpha-melanocyte-stimulating hormone that activates several melanocortin receptors. It is not approved as a medicine anywhere, and regulators have warned about unlicensed tanning products.



■ Hydrophobic
 ■ Acidic
 ■ Basic
 ■ Polar
 ■ Gly, Pro, Cys
 ■ Non-standard

Length	7 residues
Formula	C ₅₀ H ₆₉ N ₁₅ O ₉
Average mass	1,024.18 g/mol
Monoisotopic mass	1,023.5403 Da
Evidence	Early clinical studies
US status	Not FDA-approved for any use
WADA	Check the current Prohibited List

Same cyclic core as PT-141 but with a C-terminal amide.

Expected ions (monoisotopic)

[M+H] ⁺	[M+2H] ²⁺	[M+3H] ³⁺	[M+4H] ⁴⁺
1,024.5475	512.7774	342.1874	256.8923

What the COA should show

A melanotan II certificate of analysis should confirm identity by mass spectrometry against the expected mass shown on this page and report HPLC purity. A key pitfall is distinguishing melanotan II from bremelanotide, which differs only by a C-terminal amide versus acid, about 1 Da; high-resolution MS and a reference standard help. Incomplete cyclization produces a linear species with a +18 Da mass. Tryptophan oxidation and D-Phe epimerization should be considered. Salt form and net peptide content should be reported.

Storage and stability

Store lyophilized melanotan II sealed at -20 °C, protected from light and moisture. The tryptophan residue is sensitive to light and oxidation, so light shielding is advisable. The cyclic lactam structure confers better stability than many linear peptides, but solutions should still be aliquoted, kept cold and not subjected to repeated freeze-thaw cycles.

Full entry, references and latest research: <https://peptidewiki.net/compounds/melanotan-ii/>
 For laboratory research reference only. Not medical advice; not for human or veterinary use.