

SNAP-8 (10 mg Specification) Topical Research Formulation Guide

I. Overview

SNAP-8 dosage is best expressed as the concentration of active acetyl octapeptide-3 within finished topical research formulations. Human studies have evaluated SNAP-8 in creams, peptide serums and purpose-built dissolvable microneedle patches. This guideline provides preparation and calculation methods based on the 10 mg vial specification for converting full vial peptide into actual active peptide concentrations for topical cream, gel or serum research.

Research Background: Refer to relevant SNAP-8 peptide reviews for evidence regarding properties, mechanism of action, human research findings, limitations and safety.

II. Active Peptide Concentration Calculation Guide

Full 10 mg Vial Concentration Calculator

The table below shows mathematically generated concentrations when an entire 10 mg SNAP-8 vial is dispersed into different final batch weights. The 200 g to 666.7 g range covers the finished-product active reference range from developers. Smaller batches produce higher concentrations.

Final Batch Weight	Active % w/w	ppm	Research Reference
30 g	0.0333%	333 ppm	Approximately 6.7 times the upper developer reference limit
50 g	0.0200%	200 ppm	4 times the upper developer reference limit
100 g	0.0100%	100 ppm	2 times the upper developer reference limit
200 g	0.0050%	50 ppm	Equals 10 % of nominal 0.05 % supplier solution
333.3 g	0.0030%	30 ppm	Mid-range calculation
666.7 g	0.0015%	15 ppm	Equals 3 % of nominal 0.05 % supplier solution

Formulas:

Active percentage (w/w) = Peptide mg ÷ Final batch grams ÷ 10

Parts per million (ppm) = Peptide mg ÷ Final batch grams × 1000

Small-Batch Research Calculation & 1 mg/mL Stock Solution Measurement Example

A typical 30 g or 50 g topical batch requires partial peptide taken from the vial to match the 0.0015 % to 0.005 % active reference range.

Final Batch Weight	Peptide Required for 0.0015 % Active	Peptide Required for 0.0030 % Active	Peptide Required for 0.0050 % Active
30 g	0.45 mg	0.90 mg	1.50 mg
50 g	0.75 mg	1.50 mg	2.50 mg
100 g	1.50 mg	3.00 mg	5.00 mg
200 g	3.00 mg	6.00 mg	10.00 mg

Formula: Peptide mg required = Target percentage × Final batch grams × 10

If a validated formulation protocol uses the full 10 mg vial brought to a final stock volume of 10.0 mL, the nominal stock concentration equals 1 mg/mL. Each 1.0 mL contains 1.0 mg SNAP-8. The stock solution must use a compatible vehicle, and the transferred volume becomes part of the final batch.

Final Batch Weight	Stock Solution Volume for 0.0015 %	Stock Solution Volume for 0.0030 %	Stock Solution Volume for 0.0050 %
30 g	0.45 mL	0.90 mL	1.50 mL
50 g	0.75 mL	1.50 mL	2.50 mL
100 g	1.50 mL	3.00 mL	5.00 mL

This dosage reference is for informational and research purposes only.
It does not replace professional medical advice and is not for human consumption.

Important Note: These are mathematical measurement calculations and do not constitute stability claims. The base medium must accept added aqueous phase without loss of homogeneity or preservative performance. An analytical standard remained stable for 96 hours at 4°C, but this does not validate multi-week stability for topical stock solutions or creams[5].

III. Interpreting the 3 % to 10 % SNAP-8 Usage Range

Supplier-provided SNAP-8 is a preserved aqueous blend containing approximately 0.05 % acetyl octapeptide-3. Adding 3 % to 10 % of this solution to final product yields actual peptide concentrations from 0.0015 % to 0.005 % [6]. Please note raw lyophilized peptide from vials is not operationally interchangeable with preserved commercial pre-mixed stock solutions.

Trade Solution Addition	Peptide Concentration in Stock	Final Active Percentage	Equivalent ppm
3%	0.05%	0.0015%	15 ppm
6%	0.05%	0.0030%	30 ppm
10%	0.05%	0.0050%	50 ppm

IV. Published Human SNAP-8 Research Formulations

Human research evidence comes from topical or device-assisted application. Conventional cream data originates from ingredient developer testing. Peer-reviewed studies used multi-active serums or dissolvable microneedle patches, so observed outcomes cannot be fully attributed to SNAP-8 alone.

Study	Formulation	Application Schedule	Study Context	Evidence Limitations
Lipotec Developer Trial[6]	Cream containing 10 % of nominal 0.05 % SNAP-8 solution (approximate 0.005 % active peptide)	Twice daily around eye area for 28 days	17 female subjects; silicone replica and profilometry measurement; reported mean 35 % and maximum 63 % wrinkle-depth reduction	Manufacturer-reported data, not independent peer-reviewed trial
Shin et al., 2024[1]	350-micrometer dissolvable patch containing 0.03 % SNAP-8, 5 % AA2G, 4 % cyclic LPA and 90 % HA	Overnight application through day 14, then every third night through day 28	24 enrolled subjects, 21 completed split-face active versus placebo comparison	Combination device; independent contribution of SNAP-8 cannot be isolated
Avcil et al., 2020[2]	HA microneedle patch with SNAP-8, additional peptides, adenosine and seaweed extracts	12-week study	Assessment of fine lines, hydration, dermal density, thickness and tolerability	Multi-active product; SNAP-8 concentration not disclosed in abstract
Draelos et al., 2016[3]	Peptide-containing serum with SNAP-8 alongside supporting skin-care regimen	Morning and evening application for 12 weeks after 2-week wash-out period	29 female subjects; investigator grading and participant questionnaires	Open-label, no control group, multiple peptides and supporting products
Moy et al., 2023[4]	Proprietary multi-peptide facial serum containing acetyl octapeptide-3	Twice daily application for 12 weeks	31 female subjects completed dermatologist grading, imaging, hydration assessment and questionnaires	Uncontrolled multi-ingredient study, industry-funded

V. Required Supplies

1. SNAP-8 10 mg research-use vial: Record lot number, identity, assay results, purity and certificate of analysis.
2. Validated cosmetic-grade research base: Compatible cream, gel or serum base with documented formulation and preservation system.
3. Compatible stock-solution vehicle: Used only when validated formulation protocols require quantitative stock solution.
4. Calibrated analytical balance: For final batch-weight measurement and direct mass measurement within validated operating range.
5. Calibrated pipettes or positive-displacement tools: Required when quantitatively measured liquid stock solutions are used.
6. Clean mixing and transfer tools: Suitable vessels, spatulas, transfer implements and validated homogenization method.
7. pH measurement: Calibrated pH meter or validated narrow-range test strips.
8. Clean handling supplies: Disposable clean gloves, alcohol prep materials and disinfected work surface.
9. Final storage container: Compatible opaque or air-tight vessel with secure closure and measurable dispenser.
10. Label and research batch log: Record active mass, final weight, concentration, vehicle, pH, container, preparation date, storage conditions and observational notes.
11. Stability observation log: Track appearance, odor, phase separation, pH drift, container compatibility and validation test results.

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VI. Protocol Summary

Concentration and Application Reference

Developer-supplied active reference range: Approximately 0.0015 % to 0.005 % active SNAP-8.

Best-documented conventional cream example: Approximately 0.005 % active peptide.

Application context from developer testing: Twice-daily application around eye area for 28 days.

Academic serum context: Morning-and-evening or twice-daily use over 12 weeks in multi-ingredient studies.

Patch context from manufactured active patches: Overnight application through day 14, then every third night through day 28.

Storage and Stability Controls

Prior to formulation, follow lot-specific storage documentation provided by vial supplier.

Store finished batches according to validated base properties, preservatives, pH, container specifications and stability protocols.

Do not apply published shelf-life values from commercial stock solutions to formulations prepared from raw lyophilized vials.

An analytical standard remained stable for 96 hours at 4°C, but this does not establish shelf-life for cosmetic products[5].

VII. Preparation Guidelines

Verify active peptide mass: Adjust nominal 10 mg quantity if lot assay data requires correction.

Select target research concentration: Document concentration alongside its source, vehicle, administration route and application protocol.

Calculate required peptide mass: Refer to small-batch conversion table for selected final batch weight.

Define stock-solution workflow: If target mass falls below reliable balance-weighing range, prepare quantitatively measured stock solution in compatible vehicle following validated protocol.

Transfer and homogenize: Incorporate full measured volume of stock solution into final batch and apply validated method for uniform dispersion.

Validate finished batch: Record final weight, pH, visual appearance, packaging, dispensed volume, preservation controls and test outcomes.

Label research units: Include concentration, batch ID, preparation date, storage instructions and observation schedule.

Quick Reference for Topical Research

10 mg into 200 g base → 0.005 % w/w or 50 ppm.

10 mg into 333.3 g base → 0.003 % w/w or 30 ppm.

10 mg into 666.7 g base → 0.0015 % w/w or 15 ppm.

50 g batch targeting 0.005 % concentration → Requires 2.5 mg active peptide.

VIII. Reading SNAP-8 Concentration Labels Carefully

Raw peptide concentration and supplier stock-solution concentration represent different measurement metrics. Any formulation containing percentage-based additions of pre-mixed supplier stock shall also state calculated acetyl octapeptide-3 concentration for the finished batch.

Important Disclaimer: This document serves educational- research purposes only and does not constitute medical advice, diagnosis or treatment. SNAP- 8 is for research- use only and is not intended for human clinical application. Always consult a qualified healthcare professional before initiating any peptide- related research work. Individual responses may vary, and appropriate oversight is essential for safety- and- efficacy monitoring.