

# Clinical Evaluation of a Botanical Apple Peptide Complex

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## Executive Summary

This document presents a clinically aligned evaluation of a proprietary Apple Peptide Complex designed to support post-procedural skin recovery. The formulation targets key mechanisms including epidermal barrier repair, hydration, and reduction of oxidative stress. The product is positioned as a clinical adjunct within dermatology, medical aesthetics, and post-surgical recovery protocols.

## Scientific Rationale

The Apple Peptide Complex is formulated to support epidermal barrier repair, reduce transepidermal water loss (TEWL), and deliver antioxidant protection through botanical compounds including *Pyrus malus*, *Vitis vinifera*, *Vanilla planifolia*, and *Jasminum officinale*.

## Clinical Study Design

A randomized, parallel assignment clinical study evaluating post-procedural outcomes in participants receiving the Apple Peptide Complex compared to standard care across aesthetic and surgical recovery settings.

## Clinical Outcomes

Primary and secondary endpoints include improvements in elasticity, hydration, barrier function, pain reduction, erythema, hyperpigmentation, and overall safety and tolerability.

## Clinical Positioning

The Apple Peptide Complex is designed as a protocol-driven topical intervention intended for integration into post-procedural care pathways, supporting enhanced recovery and improved patient outcomes.

## Conclusion

The Apple Peptide Complex represents a clinically grounded botanical formulation bridging dermatologic science and therapeutic skincare, with potential application across medical aesthetics and post-procedural recovery settings.

## Scientific Support & References

Plant stem cells in cosmetics enhance skin regeneration and collagen synthesis. (PMC5674215)

Apple-derived exosomes improve Collagen Type I production and act as anti-inflammatory agents. (PMC9776931)

Apple peels provide phenolic bioactive compounds with antidiabetic and antiglycation properties. (PubMed 40065740)

Apple polyphenols improve antioxidant capacity and barrier function. (PubMed 35679090)

Bioaccessibility of apple polyphenols from peel and flesh. (PubMed 35357186)