10405PF.

ABS

# Ginger Mint Extract Cooling PF

Sensory

Invigorating

Refreshing



Active Concepts

VEGAN

SEPHORA CLEAN

CREDO CLEAN

CHINA

ISO 16128

PRODUCT PASSPORT

## THE FEATURES.

In personal care, sensorial experiences can transform everyday skincare into a refreshing and revitalizing ritual. Cooling sensations create an immediate connection between formulation and perception, offering consumers an invigorating experience. ABS Ginger Mint Extract Cooling PF brings this concept to life through the refreshing character of *Mentha piperita* and the revitalizing properties of ginger root. Combining these botanical extracts, this unique active delivers a pleasant cooling sensation while helping to acutely reduce skin redness and skin temperature.

***INCI**:Water & Zingiber Officinale (Ginger) Root Extract & Mentha Piperita (Peppermint) Leaf Extract*

TECHNICAL DATA SHEET.

# ABS Ginger Mint Extract Cooling PF



## THE STORY.

Summer days seem warmer now than ever before. On long, hot days, there is nothing better than a cool and refreshing drink to invigorate and revitalize the senses. The same can be said for our skin, which can also benefit from a refreshing cooling sensation. With this in mind, Active Concepts developed ABS Ginger Mint Extract Cooling PF, a water-soluble blend of ginger root and peppermint leaf extracts designed to provide a pleasant cooling effect that helps skin feel refreshed, regardless of the weather. Ginger and mint have accompanied people for centuries, valued not only for their distinctive aromas and flavors, but also for their role in traditional botanical practices. Their complementary sensory identities: the characteristic pungency of ginger and the freshness of mint, have made them enduring ingredients across cultures. In cosmetics, incorporating a sensory component allows consumers to perceive an immediate effect, helping to reinforce the benefits associated with a finished product and creating a more engaging and memorable user experience.

## THE SCIENCE.

Peppermint, or *Mentha piperita*, is a flowering plant used historically for the treatment of numerous health conditions including common cold symptoms, cramps, headaches and nausea. Peppermint's cooling properties can be attributed to its concentration of menthol, a waxy, crystalline organic compound[1]. Menthol has been shown to activate a cold sensitive receptor called Transient Receptor Potential Cation Channel M8 (TRPM8). This protein regulates the movement of ions across the membranes of cells. Just like only certain keys can open a lock, only certain stimulants can open the ion channel and access the cell. TRPM8 opens in the presence of cold temperatures and menthol allowing $Na^+$ and $Ca^+$ ions to enter, which changes the cell's electrical charge. This tells the central nervous system to sense cold. For this reason, ingredients containing peppermint are widely used to refresh and cool the skin[2].

Ginger, or *Zingiber officinalet*, is an exotic plant with highly aromatic flowers and roots. It originated in tropical Asia where it is still used as a spice and as a remedy for colds, digestive problems and motion sickness. Ginger root's active components are volatile oils and phenolic compounds, called gingerols, which give the root its distinct flavor and aroma. Gingerols have been shown to exhibit dose-dependent anti-inflammatory activity. This phytocompound acts by inhibiting COX-2, an enzyme responsible for inflammation and pain. The rhizome can also help revive and renew the skin which coexists wonderfully with other botanical extracts[3].

ABS Ginger Mint Extract Cooling PF offers a unique combination of ginger root and peppermint to refresh and revitalize the skin, a perfect combination to utilize in a variety of personal care applications.

## THE TECHNICAL DETAILS.

**INCI.** Water & Zingiber Officinale (Ginger) Root Extract & Mentha Piperita (Peppermint) Leaf Extract
**CAS.** 7732-18-5 & 84696-15-1 & 84082-70-2
**EINECS.** 231-791-2 & 283-634-2 & 282-015-4
**EUROPE.** Compliant
**USA.** Compliant
**CHINA.** Compliant

**Origin.** Botanical/Bacteria
**Natural Antimicrobial.** Leuconostoc/Radish Root Ferment Filtrate*
**Preservatives.** None
**Solvents Used.** Water
**Appearance.** Amber Liquid

## THE FORMULATION TIPS.

**pH Stability.** 3 - 7
**Temperature Stability.** Up to 70 °C
**Use Level.** 1.0 - 10.0%
**Ionic State.** Cationic

**Alcohol Compatibility.** Compatible with up to 40% SDA-40
**Solubility.** Water Soluble
**Pro Tips.** Add to the water phase

** Please note this product contains Leuconostoc/Radish Root Ferment Filtrate (Tradename: M15008-Leucidal® Liquid) - produced by Active Micro Technologies, LLC - containing 18.0–22.0% Phenolics (tested as Salicylic Acid). Please refer Leucidal® Liquid product literature for additional information.*

# ABS Ginger Mint Extract Cooling PF

## THE BENEFITS OVERVIEW.

**Sensory** *Skin Redness & Temperature Study*

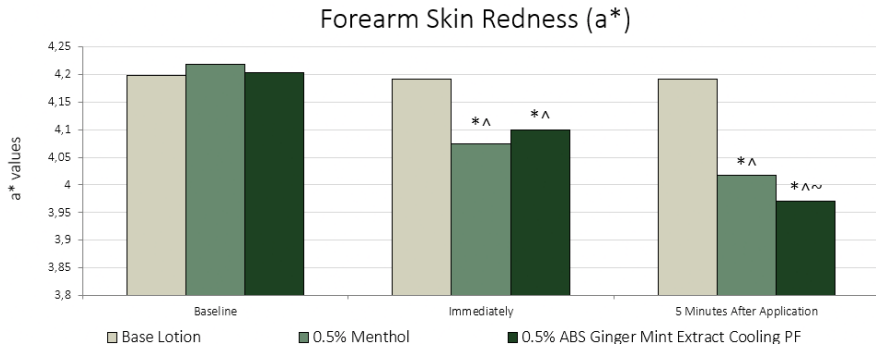
**Anti-Inflammatory** *IL-6 ELISA*

**Antioxidant** *Oxygen Radical Absorbance Capacity (ORAC) Assay*

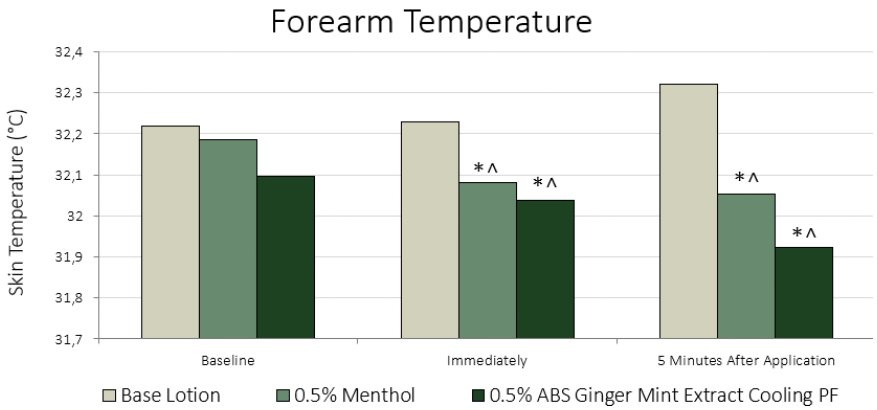
## THE EFFICACY.

### Sensory

A Skin Redness and Temperature Study was conducted in 20 volunteers to objectively evaluate the cooling performance of ABS Ginger Mint Extract Cooling PF. Changes in skin redness (a*) and surface temperature were measured at baseline, immediately after product application, and five minutes after product application using DermaLab Colori Probe instrumentation, providing complementary indicators of the skin's acute response.




**Reduced redness immediately and five minutes after application by 2.5% and 5.5%, respectively.**

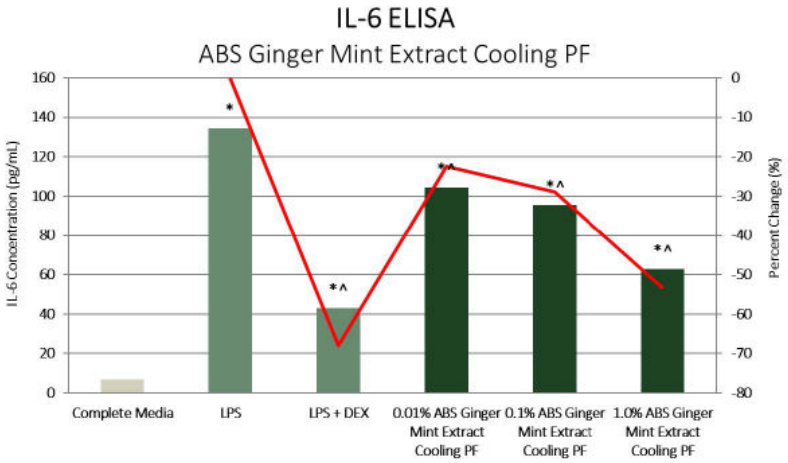



**Reduced skin temperature immediately and five minutes after application by 0.2% and 0.6%, respectively.**

## THE EFFICACY CONTINUED.

### Anti-Inflammatory

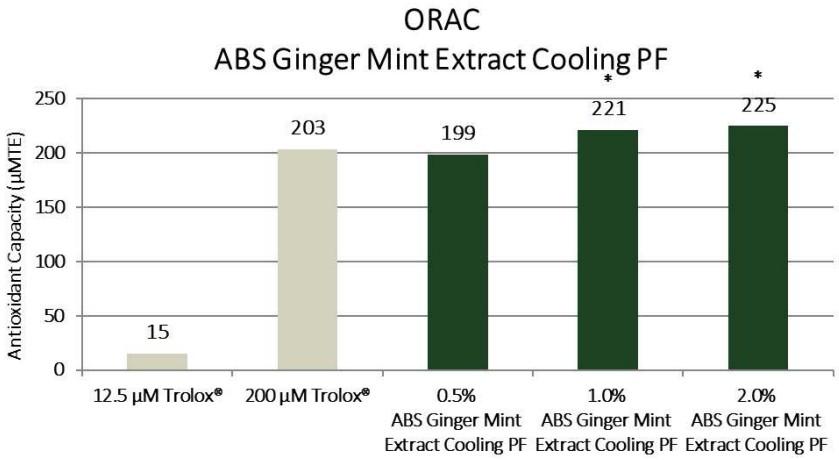
Interleukin-6 is a proinflammatory cytokine known to play an active role in inflammation, immunology, bone metabolism, reproduction, arthritis, neoplasia, and aging. IL-6 signals through the nuclear factor-kappa B (NF-kB) pathway that results in the transcription of inflammatory mediators, including matrix metalloproteinase-1 (MMP-1). Reducing the level of IL-6 and other inflammatory mediators is believed to slow down degradation of the skin matrix and, possibly, stimulate its replenishment Accordingly, an interleukin-6 ELISA was conducted to assess the in vitro effect of ABS Ginger Mint Extract Cooling PF to elicit changes in IL-6 levels in dermal fibroblasts.




**Reduced inflammation levels by -53%**

### Antioxidant

Reactive oxygen species (ROS) are generated by normal cellular processes, environmental stresses, and UV irradiation. ROS are dangerous to cellular structures and functional molecules (i.e DNA, proteins, lipids) as they act as strong oxidizing agents or free radicals. The oxygen radical absorbance capacity (ORAC) assay is a standard method used to assess antioxidant capacity of physiological fluids, foods, beverages, and natural products. The assay quantitatively measures a sample's ability to quench free radicals that have the potential to react with and damage cellular components. Accordingly, the Oxygen Radical Absorbance Capacity (ORAC) assay was conducted to assess the antioxidant capacity of ABS Ginger Mint Extract Cooling PF.




**Performed comparatively to 200 µM Trolox®**

References:
1. Hudz, N, et al. "Mentha piperita: Essential Oil and Extracts, Their Biological Activities, and Perspectives on the Development of New Medicinal and Cosmetic Products." Molecules 28.21 (2023): 7444.
2. Farco JA, Grundmann O. Menthol--pharmacology of an important naturally medicinal "cool". Mini Rev Med Chem. 2013 Jan;13(1):124-31. PMID: 23061635.
3. Yahyazadeh, Roghayeh, et al. "Promising effects of gingerol against toxins: a review article." Biofactors 47.6 (2021): 885-913.

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