Trifarotol™

Selective binding to RAR-γ

Actera
clean + active

The only 4th generation retinoid for cosmetic use

INCI
Trifarotenyl Caprylate

Physical Description
Off-white powder

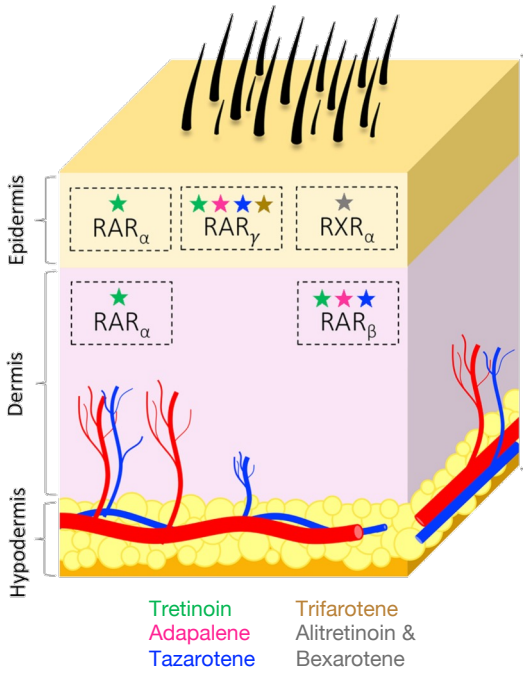
Bioactive Rationale – Selective Binding
Retinoids bind to and activate retinoic acid receptors (RARs) in the skin. Different types of retinoids activate different types of receptors (RAR-α, RAR-β, or RAR-γ) located in specific layers of the skin. Activation leads to various skin benefits depending on which receptor is engaged, and can result in normalized cell turnover, reduced inflammation, increased collagen synthesis, and improvement in the signs of photoaging.

Trifarotol is the latest retinoid for the beauty industry and the only one of its class available for cosmetic use without a prescription. This ingredient bio-transforms with the skin's own enzymes to gently deliver active trifarotene into the skin layers where it binds selectively to RAR-γ.

Selective binding to RAR-γ makes Trifarotol gentler and safer than retinoids that activate RAR-α and RAR-β while maintaining efficacy.

Benefits
- Improves signs of aging and global skin appearance
- Gentle enough for daily use
- Launch without the hassle of OTC or Rx regulations
- Oxidative stability: easy to formulate with, no additives, no degradation, no special handling, packaging or filling

Guidelines
- Suggested use level: 100 ppm
- Add to oil phase and heat to 80-85C



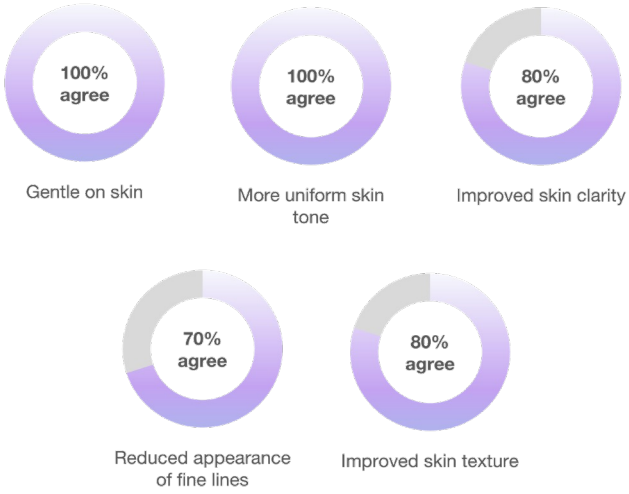
Patent Pending

Clinical Results

Study Design

- 10-subject pilot
- Ages 35-65
- 12 weeks, once daily use (PM)

Self Perception at 12 weeks

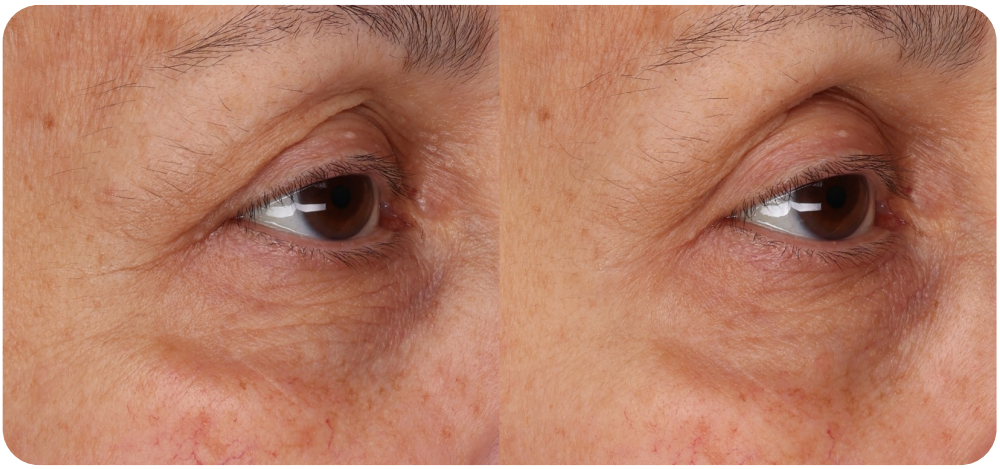


Expert Grading

Assessment	8 week Improvement vs. Baseline	12 week Improvement vs. Baseline
Texture/Smoothness	18.52 %	29.63 %
Fine Lines/Wrinkles	8.93 %	8.93 %
Evenness of Skin Tone	10.91 %	21.82 %
Clarity	25.86 %	34.48 %
Overall Appearance	15.25 %	27.12 %

$p < 0.05$

Eye wrinkle improvement after 12 weeks



Patent Pending

Trifarotol Serum

Formulation #09-102

Phase	INCI	Trade Name	%
A	Deionized Water		Q.S.
	Pisum Sativum Peptide (and) Sodium Stearoyl Lactylate (and) Magnesium Stearate (and) Xanthan Gum (and) Sodium Citrate	TeraTexture™	3.0
	Glycerin		5.0
	Caprylyl Glyceryl Ether (and) Caprylhydroxamic Acid (and) Propanediol	TeraStat™ N	2.0
B	Caprylic/capric Triglyceride (and) Trifarotenyl Caprylate		1.0
	Helianthus Annuus (Sunflower) Seed Oil		4.0
	Squalane		5.0
C	Citric Acid (or) Sodium Hydroxide		QS pH ~ 5.5
		Total	100.0

Procedure

1. Combine Phase A ingredients. Mix under high shear propeller until uniform and clump free.
2. Heat to 80-85°C. Keep at temperature for 15-20 minutes.
3. In a separate vessel, combine Phase B ingredients, and heat to 80-85°C.
4. Add Phase B to Phase A at the same temperature, mix to emulsify. Start cooling.
5. Continue mixing until at room temperature. Adjust pH using Phase C.

Physical Properties

pH = 5.49 Viscosity = 6,960 cP Appearance: Light beige thin emulsion

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