

MicroX LHA™



skin renewal for aging & acne

Actera

**MicroX LHA** is a cosmetic active for skin renewal, anti-wrinkle, anti-aging, and anti-acne. It delivers lipophilic hydroxy acid, providing high impact on skin appearance and smoothness through cell-by-cell exfoliation and stimulation of new cells in the basal layer.

MicroX LHA is delivered inside microscopic calcium particles that penetrate the deeper layers of the skin. The skin's natural pH bio-erodes the material, releasing LHA active and calcium nutrients.

#### **INCI**

Hydroxyapatite (and) Capryloyl Salicylic Acid

#### **Skin care**

Suitable for water & oil systems like lotions and creams. May be used in OTC acne products since it is synergistic with approved OTC actives. Also suitable for anti-aging and may be used in combination with retinoids.

### **Performance Benefits**

**Novelty:** Newer and gentler than AHA and BHA.

**Freedom from Patents:** MicroX LHA is outside all l'Oreal US patents related to LHA.

**Clean Beauty Formulating (“Alcohol Free”):** Most LHA formulations require alcohol to dissolve it. MicroX particles can be dispersed in either oil or water phases without any solvent.

**Clean Beauty Safety (“Retinoid Free”):** Retinoids can be harsh on skin and may not be suitable for pregnant woman. LHA can provide similar skin renewal without adverse effects.



# global exfoliation and reduced acne

## Bioactive Rationale

MicroX LHA is a targeted, time-released delivery system of lipo-hydroxy acid. LHA is a lipophilic (oil-loving) form of hydroxy acid with potent skin renewal activity. Since it is lipophilic, it partitions into sebaceous areas of the skin where it targets corneocyte desquamation. Numerous studies show that LHA provides a non-irritating, natural exfoliation which reduces the skin's older dead layer and increases new cell formation at the skin's basal layer. LHA exfoliation closely mimics our inherent physiological skin renewal.

By delivering LHA in calcium microparticles, we are able to release LHA into deeper layers of the skin. The pH within the stratum corneum degrades the calcium microparticle releasing LHA deeper in the epidermis for a continuous, long-lasting anti-aging effect. The calcium ion is also released, feeding important cell signaling processes involved in skin repair. This topical application of calcium supports skin barrier health.

## References

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## Formulation Guidelines

### OTC Acne:

1% MicroX LHA (0.4% LHA) in combination with approved OTC APIs has had demonstrated efficacy in numerous l'Oreal clinical studies.

### Non-OTC Acne:

0.8% MicroX LHA (0.3% LHA) together with other exfoliants clinically effective in published studies.

3-5% MicroX LHA (2% LHA) with no other actives clinically effective in published studies.

### Anti-Aging:

3-4% achieves similar performance to retinoids.

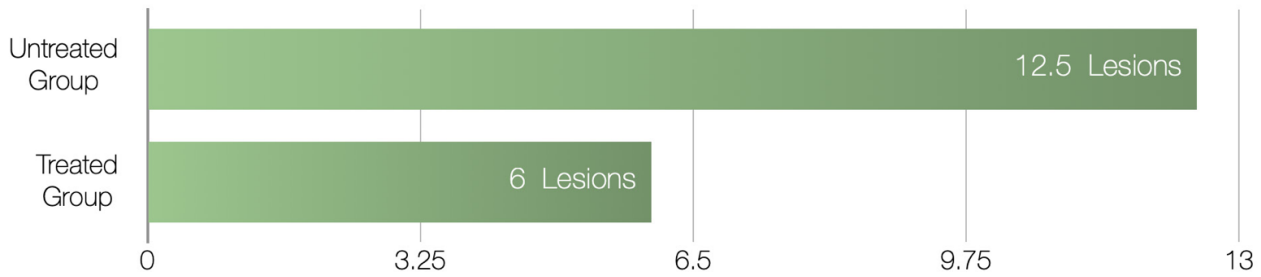
## pH Guidelines

MicroX LHA powder can be dispersed in any medium. It should not be exposed to pH less than 5.5. If formulating low pH formulas, disperse the MicroX powder into the oil phase where it is not exposed to low pH.

Dispersing in water phase is facilitated by first dispersing the MicroX powder in glycerin or diols.

# Non-OTC Acne Formulation

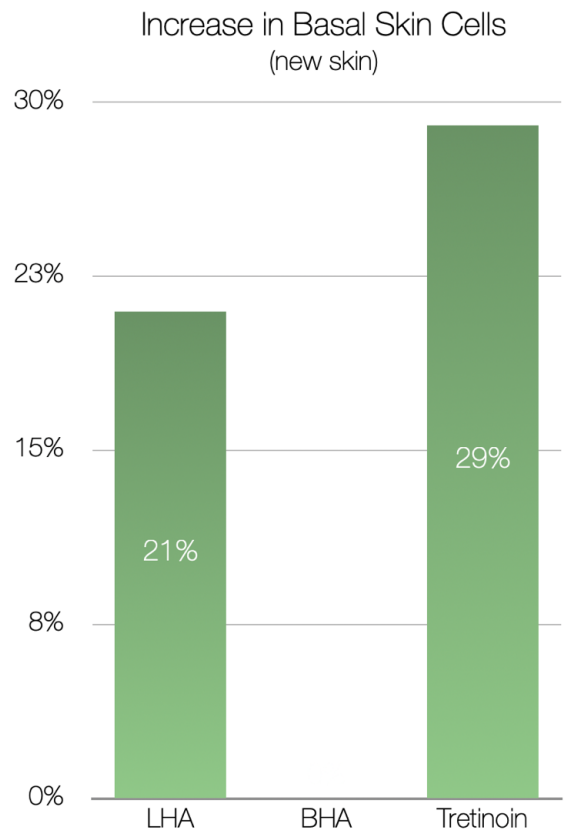
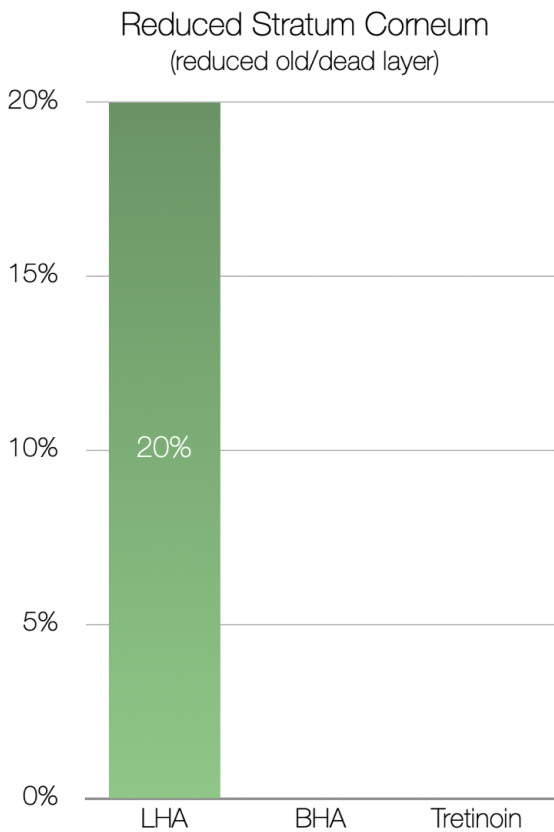
(18 week study on 34 acne sufferers)



Treated cohort used 2% LHA formulation, equivalent to 5% MicroX LHA

# Anti-Aging Skin Renewal

(4 weeks, 6 people treated with 0.025% Tretinoin, 5% BHA, and 1.5% LHA)



3.75% MicroX LHA provides skin renewal equivalent to 0.025% Tretinoin

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