

Tetrahydrocurcumin (THC)

BIOTECH EDGE

Harnessed through **advanced biotransformation technology**, Tetrahydrocurcumin represents a refined evolution of curcumin scientifically converted into its most bioavailable and skin compatible form. This biotech enhanced molecule offers amplified antioxidant and anti-inflammatory performance while eliminating the pigmentation challenges of its natural precursor. Designed for precision skincare, it intervenes at the molecular level to **inhibit melanin synthesis, neutralize oxidative stress, and preserve collagen integrity**. Through biotechnology, Tetrahydrocurcumin delivers cleaner formulation aesthetics and clinically proven efficacy a true fusion of nature's potency and scientific refinement.



Derived from curcumin, tetrahydro curcumin (THC) is a strong anti-inflammatory and antioxidant that is utilized in skincare products for its anti-aging, skin-lightening, and sun protection properties. THC being colourless molecule can be directly used in cosmetic formulation without affecting its colour - a limitation which is observed with THC's precursor. It **prevents UV damage, scavenges free radicals, and inhibits the tyrosinase enzyme to lessen the synthesis of melanin, which can potentially reduce the hyperpigmentation**.

PRODUCT DETAILS

INCI name:	Content:	Recommended Dosage:	Appearance:
Tetrahydrocurcumin	98%	0.1 – 1%	White to slightly yellow powder

APPLICATIONS :



Anti-aging creams and serums



brightening products



Complexion correcting cream



Soothing and sensitive skin formulations



Sun care and after-sun repair products

KEY FEATURES :

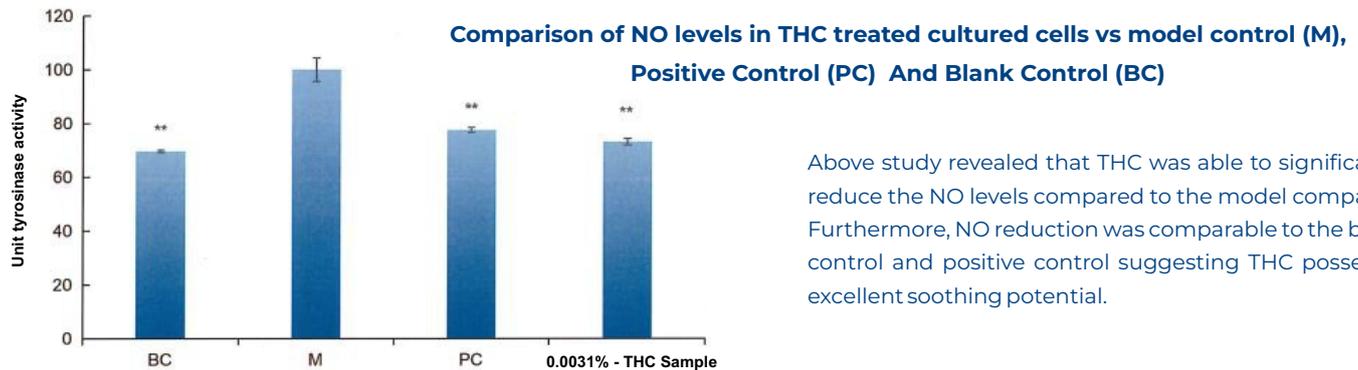
- Restores firmness and suppleness to the skin
- Enhances lifting and visible density
- Boosts hydration and skin smoothness
- Supports soothing and skin barrier function

WHAT IT BRINGS TO YOUR FORMULATION :

- Adds multi-functional benefits: soothing, brightening, and anti-aging
- Compatible with sensitive skin and diverse product formats
- Works in synergy with niacinamide, vitamin C, and UV filters
- Enables clean, high-performance skincare positioning

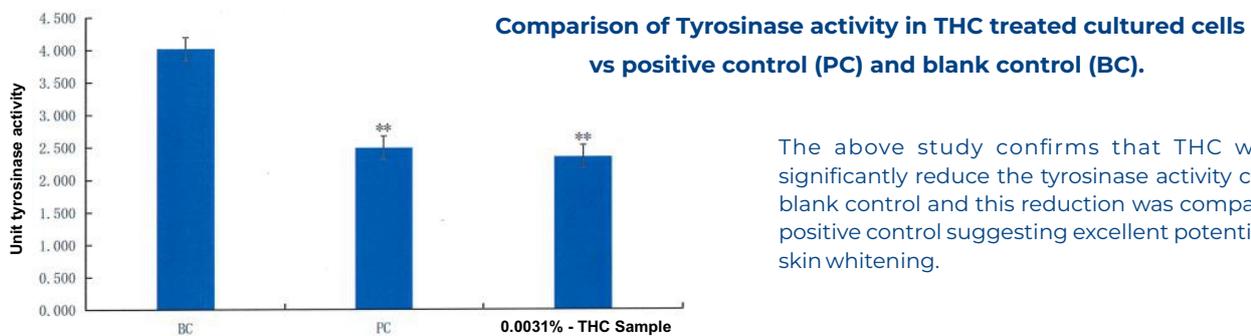
EFFICACY STUDIES :

THC Reduces NO levels in Cultured Cells Indicating THC's Potential for Soothing Effect



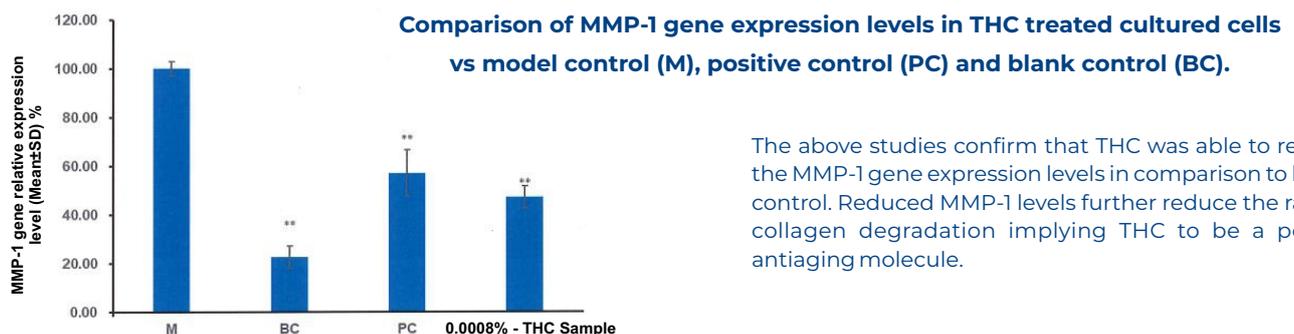
Above study revealed that THC was able to significantly reduce the NO levels compared to the model compared. Furthermore, NO reduction was comparable to the blank control and positive control suggesting THC possesses excellent soothing potential.

THC Reduces Tyrosinase Activity in Cultured Cells Indicating Potential Skin Brightening Efficacy



The above study confirms that THC was able to significantly reduce the tyrosinase activity compared to blank control and this reduction was comparable to the positive control suggesting excellent potential of THC for skin whitening.

THC Reduces MMP-1 expression in cultured cells demonstrating Antiaging property of THC



The above studies confirm that THC was able to reduce the MMP-1 gene expression levels in comparison to blank control. Reduced MMP-1 levels further reduce the rate of collagen degradation implying THC to be a potent antiaging molecule.

CLINICALLY PROVEN BENEFITS :

- Reduces nitric oxide to calm cellular inflammation and promote healthier-looking skin
- Inhibits tyrosinase activity, effectively reducing melanin synthesis for visible brightening
- Neutralizes reactive oxygen species(ROS), providing antioxidant protection
- Decreases MMP-1 expression, supporting collagen preservation and anti-aging