

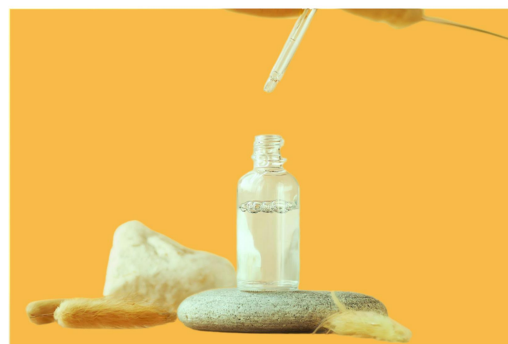
α -Bisabolol

Bio-Fermentation Technology

• Natural • 100% Bio-based Carbon Source

Product Introduction

α -Bisabolol is a natural monocyclic sesquiterpene alcohol that is widely recognized for its soothing, anti-inflammatory, and healing properties. It is most commonly found in the essential oil of the German chamomile (*Matricaria chamomilla*) but can also be extracted from other plants such as the Candeia tree (*Vanillosmopsis erythropappa*).



Chemical Synthetic V.S Natural

According to different sources, α -bisabolol can currently be divided into synthetic sources and natural sources.



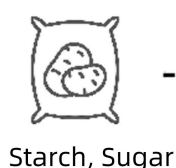
Derived from Candeia Tree

Naturally derived α -bisabolol is generally extracted from the Brazilian shrub (Candeia), but due to the scarcity of raw materials, the yield is very low.

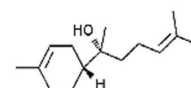
Synthetic α -bisabolol generally uses farnesol as the starting material, and is purified by distillation to obtain racemic (\pm)- α -bisabolol.

Green Bio-fermentation Process: 98% purity

- 100% Biogenic Carbon Source
- Natural Chiral Active Molecules
- Stable and Scalable Production
- Environmentally Friendly Process



downstream processing



Natural (-)- α -Bisabolol

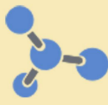
Excellent alternative to Plant-derived and Synthesis Sources

Different properties Comparison vs. Plant & Synthesis sources



Specific rotation

Natural: -58.0~-53.0
Synthesis: 0



Isomers

Natural: (-)- α -bisabolol
Synthesis: (\pm)- α -bisabolol



Bioactivity

Natural bisabolol is *twice*
as active as synthetic

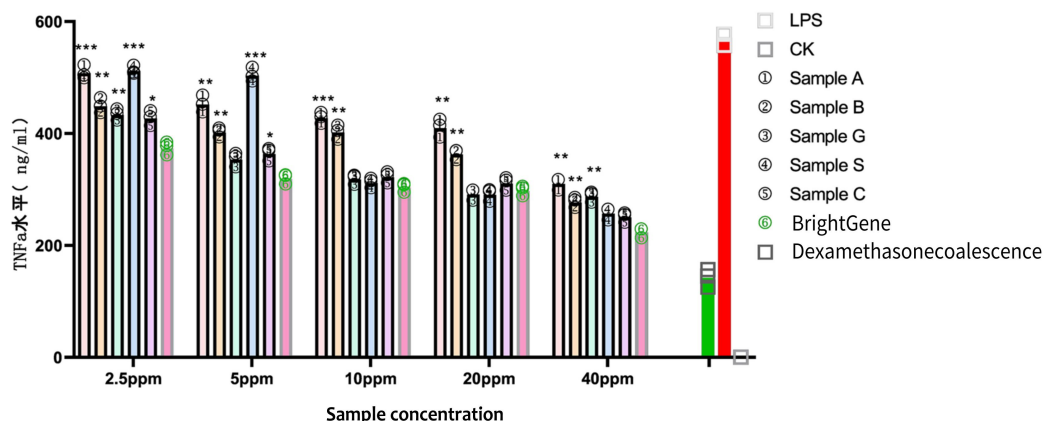


Fragrance

Natural woody scent
v.s Pungent smell

In Vitro Efficacy Experiment: Anti-inflammatory Function

The secretion level of inflammatory factor TNF α in macrophage Raw264.7 cells after bisabolol treatment



Test Process:

Mouse macrophage Raw264.7 cells were treated with different concentrations of α -bisabolol from different sources and then induced with LPS.

The concentration of TNF α was detected using a kit in triplicate, with dexamethasone as a positive control.

Test Process:

- α -bisabolol (BrightGene) can inhibit the secretion of inflammatory factor TNF α in mouse macrophage Raw264.7. When the concentration is as low as 2.5ppm, the inhibition rate can reach 34%; the inhibition rate increases with the increase of the concentration, and the inhibition rate can reach 60% at 40ppm.
- In most concentrations (except 20ppm), the inhibitory effect of α -bisabolol (BrightGene) on TNF α secretion is higher than that of other sources at the same concentration.



Innovation Never Stops

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