PROCESS FOR THE ISOLATION OF NATURAL FRAGRANCES

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HINTERGRUND

Natural fragrances like iris, rose or orange flower extracts are some of the most luxurious raw materials for the cosmetic and perfume industries and find application in various high-end products.

Conventional extraction methods to obtain plant extracts like iris butter or rose absolute are hydrodistillation and solvent extraction, which exhibit major drawbacks - such as long process duration, high energy consumption and the use of flammable and toxic solvents like hexane. In addition, high process temperatures result in partial degradation and volatilization of the delicate fragrance compounds.

LÖSUNG

A simple, green, mild and efficient extraction method using biocompatible and - biodegradable aqueous soap solutions with non-toxic additives was developed to produce competitive fragrance extracts without the need for environmentally hazardous hexane.

As an example, the extraction of iris rhizomes was successfully completed within a short time (30 min) and at moderate temperatures (40 °C). The inventive method uses an intrinsic plant substance for extraction, so that toxic and flammable solvents are completely avoided and a natural product free of toxic residues is achieved. Moreover, the extraction medium can be re-used for additional extraction cycles.
A: Iris germanica for iris butter production. B: Rosa damascena for rose absolute production. C: Process for a mild and eco-friendly extraction of fragrances, shown for iris butter extraction from dried iris rhizomes.

VORTEILE

- Perfumes and scents
- High-quality cosmetics
- Natural cosmetics
- Flavoring of luxury foodstuffs
- Flavoring of drinks and tobacco