

TECHNOLOGY OFFER

Insect/Acaridine repellent based in colloidal stabilized wax particles

This invention describes a long-lasting insect repellent made from beeswax, propolis, and shellac, forming nano/microparticles that encapsulate repellents. When applied, it creates a wax film that acts as a mechanical barrier, enhances adhesion, and offers wound-healing properties.

BACKGROUND

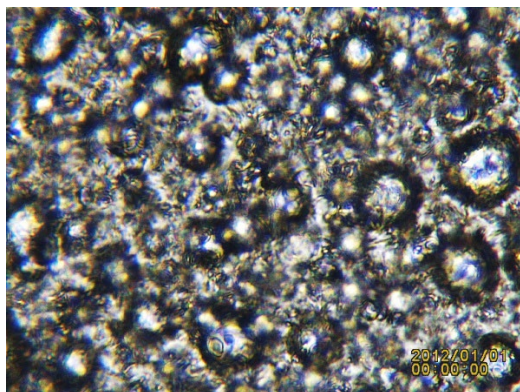
Conventional insect repellents often rely on synthetic insecticides or essential oils, which can be toxic, short-lived, environmentally harmful, and ineffective against certain species. Some insect repellents are environmentally harmful, particularly to aquatic life, and act only as contact poisons, failing to prevent bites, which is a major drawback in disease transmission.

TECHNOLOGY

This invention describes a material composition for insect and arachnid repulsion, functioning as a contact repellent. It combines purified beeswax, propolis, and shellac to form nano/microparticles via ultrasonic processing. Known repellents, synthetic or natural, can be encapsulated within the wax particles, stabilized by shellac, and stored as a colloidal suspension.

When applied as a spray or lotion, the ethanol/water evaporates, leaving a wax film that acts as a mechanical barrier and provides long-lasting repellent effects. Propolis enhances adhesion to fur and offers wound-healing properties.

The formulation is suitable for animals like horses and dogs, and humans, with optional UV protection or cream-based application for sensitive areas.



BENEFITS

- extended repellent action by colloiddally stabilizing the active ingredients.
- Dual protection by mechanical barrier and olfactory effect as well as adhesion, and wound-healing.

REFERENZ:
2021-02

OPTIONEN:

- R&D Cooperation
- Licensing

KEYWORDS:

Insect repellent, Beeswax, Propolis

TECHNOLOGY READINESS

LEVEL

Prototype (TRL4)

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