

Method of obtaining an extract from the *Drosera gigantea* sundew tissues, extract from sundew tissues and the use of the extract as a biologically active agent with high antibacterial potential

About the solution

The invention concerns a method for obtaining an extract from in vitro-cultured tissues of *Drosera gigantea*. The extract contains active secondary metabolites with strong antibacterial potential and low levels of toxic naphthoquinones (e.g. plumbagin <100 µg/g FM).

Two extraction variants are proposed: aqueous and 50% tetrahydrofuran solution. The process includes purification, freezing, microwave or ultrasonic extraction, filtration and lyophilization to obtain a dry residue rich in metabolites.

The extract shows strong activity against Gram-positive bacteria (*S. aureus*, *E. faecalis*, *A. baumannii*) and moderate activity vs Gram-negative strains (*E. coli*, *P. aeruginosa*, *K. pneumoniae*). It is non-toxic to model organisms (*C. elegans*) and can be used in pharmaceutical, cosmetic and veterinary products as a natural alternative or additive to antiseptic formulations.



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IP Protection

The invention is the subject of polish patent application: **P.436541**

Applications

- Dermatological and veterinary preparations with antibacterial properties,
- Ingredient in protective and regenerating cosmetics,
- Alternative to antibiotics in the treatment of local skin infections.

Cooperation opportunities

- Partnership in research and pre-implementation testing,
- Licensing of the technology or joint product development,
- Collaboration with the pharmaceutical, cosmetic, and veterinary sectors.