

LACTYL LACTATES AS BIODEGRADABLE MATERIALS WITH OTHERS ADDITIONAL PROPERTIES FOR VARIOUS APPLICATIONS



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TECHNOLOGY

Preparation method of lactyl lactates from raw materials coming from renewable sources by using metal- and solvent-free procedures, which avoids contamination of the synthesized compounds with undesirable abiogenic contaminants and leads to a reduction of economic costs.

WHAT TECHNOLOGY SOLVES:

The technology tries to replace raw materials from fossil and nonrenewable sources with those that fulfill the criteria set by the European Union in the Green Deal for Europe (Green Deal 2050) while maintaining all important utility parameters.

APPLICATIONS:

The prepared compounds can be applied as new types of surfactants, emulsifiers and solvents with higher added value (high degree of biodegradability, antimicrobial effect, preservation, etc.) in drug, cosmetic, veterinary and pharmaceutical product formulations.

DEVELOPMENT PHASE:

The method of preparation of the desired compounds is described in two national patents and in an international patent application. The selected compounds were tested for properties for their application as new biodegradable surface substances (99% for OECD 302B and 82% for OECD 301D) with disinfectants with other properties (tests for minimum inhibitory concentration, tests according to ČSN EN 13 727 + A2).

CURRENT TECHNOLOGY ON THE MARKET:

Several new surfactants have appeared on the market (sophorolipid, rhamnolipid, etc.) that respect current trends, but none of the companies yet specializes in lactyl lactates, or with them, it does not offer another added value that can be imprinted on the lactyl lactate molecule using our technology (antimicrobial effect and other important special properties). Lactyl lactates can be used as active substances (surfactants, preservatives, emulsification, etc.) in the product formula, but can also serve as solvents for other active ingredients and replace other commonly used solvents with a worse toxicological profile.

CUSTOMERS:

- companies operating in the field of cosmetics, pharmaceuticals, veterinary applications and pharmaceuticals on the Czech and European markets
- a manufacturer of advanced products whose customers emphasize the use of ecological, ethical and sustainable raw materials

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Patent situation:

CZ patents, PCT application filed

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