Co-amorphous mixtures - the solution to your solubility problems

Any poorly soluble crystalline compound can be transformed into a highly soluble co-amorphous mixture using our excipients. This results in high solubility and faster dissolution.

Value proposition/USP

Powder performance is often limited by the poor solubility of compounds, for example in the fields of pharmaceutical and food sciences. Natural biomolecules can help solve this issue when used in a so-called co-amorphous mixture. A certain type of biomolecules have demonstrated exceptionally good properties in these mixtures and are considered safe, non-toxic and inexpensive to use in foods and medicines.

Business Opportunity/Objective/Commercial perspectives

The proprietary co-amorphous technology can be used in any field where a higher solubility of a given compound is desired. This novel concept makes use of commercially available materials and can be combined with most existing manufacturing processes. The natural biomolecules can be waste products from industrial production lines, which are available as commercial materials with high quality and purity.

Technology description/technology Summary

Materials can be crystalline or amorphous. The amorphous form is more soluble than the crystalline form of a compound, but the amorphous form is unstable and tend to quickly transform into the poorly soluble crystalline form. By creating a co-amorphous mixture, which is a combination of a compound with our natural biomolecules and making use of biological principles, a stable system with high solubility is obtained.

Development phase/current state

Proof of concept has been performed with a set of different biomolecules in combination with commercially relevant poorly soluble compounds. At the moment we are at an early stage development and are investigating the feasibility of the technology for various commercial applications.

The inventors

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Intellectual property rights: Intellectual property rights - Danish priority application filed December 2016