## Object of the invention

It was thus an object on the present invention to provide improved formulations of oily substances. More specifically, it was an object of the present invention to provide powders of oily substances suitable for use in solid dosage forms like tablets, in particular in orodispersible tablets.

## Presentation of the invention

The inventors succeeded in improving previous formulations by developing a new emulsion formula, particularly suitable for processing oil soluble active substances by electrostatic spray-drying. The formulation comprises two different starchy materials that are an octenyl succinate starch and a maltodextrin, in particular a maltodextrin derived from amylose-rich starch.

The powder obtained thereof is directly compressible, and can thus advantageously be used for the manufacture of tablets. Moreover, the powder obtained thereof exhibits great chemical and physical stability (oxidation, photostability, temperature etc.)

Although patent application WO 2016/123224 gives a list of potential material that can be used as a wall material among which various starchy materials are cited, WO 2016/123224 never discloses nor suggest combining them. More specifically, WO 2016/123224 never disclose nor suggest combining octenyl succinate starch with a maltodextrin, in particular an amylose-rich maltodextrin.

Without being bond by any theory, the inventors believe that the two starchy materials used in accordance with the invention do not act in the same way in the oil-in-water emulsion. Contrary to the octenyl-succinate starch that is likely at the interface between the aqueous and oily phases (acting as a surface-active agent), the maltodextrin is part of the aqueous phase.

This provides advantageous properties to the powder obtained, in particular for use in tableting, and more specifically for orodispersible tablets.

## Brief description of the invention

### Summary

In a first aspect, the present disclosure thus first relates to a process for the preparation of a powder by electrostatic spray-drying of an oil-in-water emulsion, wherein said oil-in-water emulsion comprises an octenyl succinate starch and a maltodextrin. In a second aspect, the present disclosure further relates to a powder

obtainable from the first aspect. In a third aspect, the present disclosure further relates to a solid dosage form comprising the powder of the second aspect.

## Detailed description of the invention

A first object of the present invention is a process for the preparation of a powder by electrostatic spray-drying of an oil-in-water emulsion, wherein the oil-in-water emulsion comprises an octenyl succinate starch and a maltodextrin.

The octenyl succinate starch and maltodextrin useful of the invention both are starchy materials. The expression “starchy material” classically refers to a substance obtained from starch. It is reminded that the expression “starch” classically refers to the starch isolated from any suitable botanical source, by any technique well known to those skilled in the art. Isolated starch typically contains no more than 3 % of impurities; said percentage being expressed in dry weight of impurities with respect to the total dry weight of isolated starch. These impurities typically comprise proteins, colloidal matters and fibrous residues. Suitable botanical source includes for instance legumes, cereals, and tubers.

The first starchy material useful to the invention is an octenyl succinate starch.

Such octenyl succinate starches are well known to those skilled in the art. They are in particular and advantageously food-grade octenyl succinate starches. Such octenyl succinate starches typically are obtainable by esterification, for instance from the reaction of a starchy material with octenyl succinic anhydride.

Preferably, the octenyl succinate starch useful to the invention is cold-water soluble. In particular, this means that the typical insoluble granular structure observed in raw starch is lost in the octenyl succinate starch. This can for instance be done by subjecting the starchy material to a so-called step of cooking. This can for instance be performed on the raw starch, before the step of esterification.

Preferably, the octenyl succinate starch useful to the invention is further partially hydrolyzed.

Preferably, the octenyl succinate starch useful to the invention is derived from starch comprising more than 50 % of amylopectin, expressed as dry weight relative to the total