magnesium stearate, calcium stearate, zinc stearate, mineral oil, silicone fluid, sodium lauryl sulfate, L-leucine, sodium stearyl fumarate, etc.

It is known the use of 2-amino-2-[2-(4-octylphenyl)ethyl]propane-1,3-diol in solid pharmaceutical compositions, for example, in WO 2008/037421, where polymer resins and one or more metal oxides were introduced into composition.

It is known the use of 2-amino-2-[2-(4-octylphenyl)ethyl]propane-1,3-diol in solid pharmaceutical compositions, for example, in RU 2426555, where polyethylene glycol 300 and polysorbate 80 are used in the compositions for treating cancer.

It is also known the use of 2-amino-2-[2-(4-octylphenyl)ethyl]propane-1,3-diol in solid pharmaceutical compositions, for example, in RU 2358716, where a pharmaceutical composition suitable for oral administration comprises 2-amino-2-[2-(4-octylphenyl)ethyl] propane-1,3-diol hydrochloride (FTY-720), sugar alcohol represented by mannitol, magnesium stearate as a lubricant, which is intended for use in the manufacture of a medicament for prophylaxis or treating rejection of new organs or transplant tissue, graft versus host reaction, autoimmune diseases, inflammatory conditions, viral myocarditis and viral diseases related to viral myocarditis, for use in the manufacture of a medicament for treating multiple sclerosis.

When automatic filling machines are used the substances must exhibit some definite physical-chemical and technological properties, such as:

definite size and shape of particles;

uniformity of particle size;

homogeneity of mixing;

flowability (flow);

moisture content;

ability to be compactly formed under pressure.

(Industrial Technology of medicaments. Vol. 2 ed. Chueshova V.I., 2002, p. 407-408).

On retention of sufficiently high parameters of bioavailability of the active component, the disadvantage of the above known solid pharmaceutical compositions of 2-amino-2-[2-(4-octylphenyl)ethyl]propane-1,3-diol is insufficiently high flowability, that does not allow effectively use modern automatic equipment.

Summary

In a first aspect of the present disclosure, there is provided a pharmaceutical composition with improved flowability comprising modulator of S1P receptors representing 2-

amino-2-[2-(4-octylphenyl)ethyl]propane-1,3-diol or a pharmaceutically acceptable salt thereof, lactulose, polyethylene glycol-6000, and polyvinyl pyrrolidone.

In a second aspect of the present disclosure, there is provided a medicament in the form of tablet or capsule placed in a pharmaceutically acceptable package comprising a pharmaceutical composition with improved flowability as defined herein.

In a third aspect of the present disclosure, there is provided a method for preparation of medicament suitable for oral administration, according to which modulator of S1P receptors representing 2-amino-2-[2-(4-octylphenyl)ethyl]propane-1,3-diol or a pharmaceutically acceptable salt thereof, is mixed together with lactulose, polyethylene glycol-6000, and polyvinyl pyrrolidone, as defined herein.

Disclosure of the Invention

The task of the present invention is to provide a new highly effective, solid pharmaceutical compositions on the basis of S1P receptor modulator, representing 2-amino-2-