CLAIMS

1. A granule intended to float at the surface of the stomach liquid, of the core-shell type comprising a solid core on the one hand, on which is deposited a mixture formed with the active ingredient and an alkaline agent which may generate a release of gas in the presence of said stomach liquid, characterized in that said active ingredient, the absorption site of which is located at a very high level in the digestive tract is selected from the group formed by furosemide, tiapride, alfuzosin, captopril, GHB, metformin, nifedipine, buprznorphine, modafinil, methadone, nalbuphine, tetrahydrocannabinol, an intermediate layer being provided, separating said alkaline agent and said active ingredients when the latter is an acid compound.

2. The granule according to claim 1, characterized in that said alkaline agent is selected from the group formed by carbonates and bicarbonates, and is notably selected from the group formed by sodium bicarbonate, sodium carbonate, sodium glycine carbonate, potassium bicarbonate, magnesium carbonate and calcium carbonate.

3. The granule according to one of claims 1 or 2, characterized in that said solid core is selected from insoluble carriers, and that more particularly from the group formed by polyols, gums, silica derivatives, calcium or potassium derivatives, mineral compounds such as dicalcium or tricalcium phosphates, saccharose, cellulose derivatives, notably microcrystalline cellulose, ethyl cellulose or hydroxypropylmethylcellulose, starch, gluconates, silicates, sugar crystals or mixtures thereof.

4. The granule according to any of claims 1 to 3, characterized in that said solid core supporting said active ingredients consists of said alkaline agent.

5. The granule according to any of claims 1 to 4, characterized in that it further comprises a binder selected from the group formed by maltodextrins, starch, saccharose, polyols, gum arabic, polyvinylpyrrolidone, cellulose, hydroxypropylmethylcellulose, hydroxypropylcellulose, shellac, or mixtures thereof.

6. The granule according to any of claims 1 to 5, characterized in that it is coated with a coating agent notably selected from the group consisting of shellac, polyvinylpyrrolidone, polyethyleneglycol, cellulose derivatives such as HPMC or HPC, saccharose, fatty glycerides, or mixtures thereof.

7. The granule according to any of claims 1 to 6, characterized in that it comprises from 0.5% to 60% by weight of active ingredient based on the total weight of the granule.

8. The granule according to any of claims 1 to 7, characterized in that it comprises from 15% to 70% by weight of an alkaline agent based on the total weight of the granule.

9. The granule according to any of claims 1 to 7, characterized in that the solid core represents 20% to 80% by weight based on the total weight of the granule.

10. The granule according to any of claims 1 to 9, characterized in that its diameter is less than 3 mm.

11. A method for preparing a granule according to any of claims 1 to 10, of the core-shell type comprising a solid core on the one hand on which is deposited a mixture formed with the active ingredients and with an alkaline agent which may generate a release of gas in the presence of said stomach liquid characterized in that it comprises a step for applying said mixture by powdering on said solid core.

CLAIMS

1. Floating granule comprising a solid core on which an active ingredient is supported and also comprising a compound which is capable of generating a gas discharge which is constituted by an alkaline agent, said granule being characterised in that it does not comprise an acidic agent which is capable of generating a gas discharge.

2. Floating granule according to claim 1, characterized in that the alkaline agent is not in contact with an acidic compound.

3. Floating granule according to claim 1, in which, when it comprises an acidic compound, the alkaline agent and said acidic compound are separated by an intermediate layer.

4. Floating granule according to claim 1, characterized in that it does not comprise an acidic compound.

5. Floating granule according to any one of claims 1 to 3, characterized in that the alkaline agent is selected from the group consisting of carbonates and bicarbonates and is particularly selected from the group consisting of sodium bicarbonate, sodium carbonate, sodium glycine carbonate, potassium bicarbonate, magnesium carbonate and calcium carbonate.

6. Floating granule according to any one of claims 1 to 4, characterised in that the solid core is selected from insoluble supports, and more particularly selected from the group which consists of polyols, gums, derivatives of silica, derivatives of calcium or potassium, mineral compounds such

as dicalcium phosphates and tricalcium phosphates, saccharose, cellulose derivatives, in particular monocrystalline cellulose, ethyl cellulose and hydroxy propyl methyl cellulose, starch, gluconates, silicates, sugar crystals, and admixtures thereof.

7. Granule according to claim 1 or 2, characterised in that the alkaline agent constitutes the solid core on which the active ingredient is supported.

8. Floating granule according to any one of claims 1 to 6, characterised in that it comprises a binder, in particular selected from the group consisting of maltodextrins, starch, saccharose, gum arabic, polyvinyl pyrrolidone, hydroxy propyl methyl cellulose, shellac, hydroxy propyl cellulose, cellulose, polyols, or admixtures thereof.

9. Floating granule according to any one of claims 1 to 7, characterised in that it is coated, in particular by a coating agent which is selected from the group consisting of shellac, polyvinyl pyrrolidone, polyethylene glycol, cellulose derivatives such as HPMC or HPC, saccharose, fatty acid glycerides and admixtures thereof.

10. Floating granule according to any one of claims 1 to 8, characterised in that the active ingredient is selected from the group consisting of antalgics and analgesics.

11. Floating granule according to any one of claims 1 to 9, characterised in that it comprises from 0.5% to 60% by weight of active ingredient in relation to the total weight of the granule.

12. Floating granule according to any one of claims 1 to 10, characterised in that it comprises from 15% to 70% by weight of alkaline agent in relation to the total weight of the granule.

13. Floating granule according to any one of claims 1 to 11, characterised in that the solid core represents from 20% to 80% by weight in relation to the total weight of the granule.

14. Floating granule according to any one of claims 1 to 12, having a diameter which is less than 3 mm.

15. Method for preparing a floating granule according to any one of claims 1 to 13, characterised in that it comprises a step of application, by powdering the active ingredient, to the insoluble support and a step of adding the alkaline agent.

16. Method for preparing a floating granule according to claim 6, characterised in that it comprises a step of application, by powdering the active ingredient, to the alkaline agent constituting the solid core, on which the active ingredient is supported.