CLAIMS

1. A stable controlled release pharmaceutical dosage form comprising:

- intragranular excipients comprising:

- quetiapine or a pharmaceutically acceptable salt thereof,

- at least one hydrophobic controlled release agent,

- at least one pH dependent polymer, and

- extragranular excipients comprising at least one pharmaceutically acceptable excipient, wherein the hydrophobic controlled release agent is hydrogenated castor oil.

2. The controlled release pharmaceutical dosage form according to claim 1, wherein the content (in % by weight) of the hydrogenated castor oil is in the range from 4.5% to 35% and the content of the at least one pH dependent polymer is in the range from 15% to 35%.

3. The controlled release pharmaceutical dosage form according to claim 1 or 2, wherein the ratio of the % by weight content between the at least one hydrophobic controlled release agent and the at least one pH dependent polymer ranges from 1:3 to 1:7.

4. The controlled release pharmaceutical dosage form according to claim 1 or 2, wherein the ratio of the % by weight content between the at least one hydrophobic controlled release agent and the at least one pH dependent polymer ranges from 1:4 to 1:6.

5. The controlled release pharmaceutical dosage form according to claim 1 or 2, wherein the ratio of the % by weight content between the at least one hydrophobic controlled release agent and the at least one pH dependent polymer ranges from 1:4.5 to 1:5.5.

6. The controlled release pharmaceutical dosage form according to any one of claims 1 to 5, wherein the at least one hydrophobic controlled release agent is stearic acid.

7. The controlled release pharmaceutical dosage form according to any one of claims 1 to 5, wherein the at least one hydrophobic controlled release agent is hydrogenated castor oil.

8. The controlled release pharmaceutical dosage form according to any one of claims 1 to 7, wherein the pH dependent polymer is a methacrylic acid copolymer and is present in an amount ranging from 15% to 35 % w/w of the total pharmaceutical composition.

9. The controlled release pharmaceutical dosage form according to any one of claims 1 to 7, wherein the pH dependent polymer is a Poly(methacrylic acid–co-ethyl acrylate) 1:1 and is present in an amount ranging from 15% to 35 % w/w of the total pharmaceutical composition.

10. The stable controlled release pharmaceutical dosage form according to any one of claims 1 to 9, wherein said dosage form provides a dissolution of quetiapine or pharmaceutically acceptable salt thereof from 30% to 45 % within 1 hour, from 45% to 70 % within 6 hours; from 75% to 95 % within 16 hours as measured by USP Apparatus I (basket) at 100 rpm, in 1000 mL of 0.1N HCl (1.2 pH) for the first hour, in 1000 mL of 4.5 pH acetate buffer for the 2 hours and subsequently in 1000 mL of 6.8 pH phosphate buffer.

11. The stable controlled release pharmaceutical dosage form according to any one of claims 1 to 9, wherein said dosage form provides a dissolution of quetiapine or pharmaceutically acceptable salt thereof from 50% to 60 % (by wt) of quetiapine or pharmaceutically acceptable salt thereof released after 2 hours, from 60% to 70 % (by wt) after 4 hours; from 65% to 80 % (by wt) of quetiapine or pharmaceutically acceptable salt thereof released after 8 hours, from 70% to 80 % (by wt) of quetiapine or pharmaceutically acceptable salt thereof released after 12 hours, and over 75 % (by wt) of quetiapine or pharmaceutically acceptable salt thereof released after 16 hours, as measured by USP Apparatus I (basket) method at 200 rpm, at 1000 ml aqueous buffer pH 1.2 from 0 to 2 hours and pH 6.8 from 4 to 20 hours at 37°C.

CLAIMS

1. A stable controlled release pharmaceutical dosage form comprising:

- intragranular excipients comprising:
  - quetiapine or a pharmaceutically acceptable salt thereof~~;~~,
  - at least one hydrophobic controlled release agent,
  - at least one pH dependent polymer, and
- extragranular excipients comprising at least one pharmaceutically acceptable excipient, wherein the hydrophobic controlled release agent is hydrogenated castor oil.

2. The controlled release pharmaceutical dosage form according to claim 1, wherein the content (in % by weight) of the hydrogenated castor oil is in the range from 4.5% to 35% and the content of the at least one pH dependent polymer is in the range from 15% to 35%.

3. The controlled release pharmaceutical dosage form according to claim 1 or 2, wherein the ratio of the % by weight content between the at least one hydrophobic controlled release agent and the at least one pH dependent polymer ranges from 1:3 to 1:7.

4. The controlled release pharmaceutical dosage form according to claim 1 or 2, wherein the ratio of the % by weight content between the at least one hydrophobic controlled release agent and the at least one pH dependent polymer ranges from 1:4 to 1:6.

5. The controlled release pharmaceutical dosage form according to claim 1 or 2, wherein the ratio of the % by weight content between the at least one hydrophobic controlled release agent and the at least one pH dependent polymer ranges from 1:4.5 to 1:5.5.

6. The controlled release pharmaceutical dosage form according to any one of claims 1 to 5, wherein the at least one hydrophobic controlled release agent further comprises stearic acid.

7. The controlled release pharmaceutical dosage form according to any one of claims 1 to 6, wherein the pH dependent polymer is a methacrylic acid copolymer and is present in an amount ranging from 15% to 35 % w/w of the total pharmaceutical composition.

8. The controlled release pharmaceutical dosage form according to any one of claims 1 to 6, wherein the pH dependent polymer is a Poly(methacrylic acid-co-ethyl acrylate) 1:1 and is present in an amount ranging from 15% to 35 % w/w of the total pharmaceutical composition.

9. The stable controlled release pharmaceutical dosage form according to any one of claims 1 to 8, wherein said dosage form provides a dissolution of quetiapine or pharmaceutically acceptable salt thereof from 30% to 45 % within 1 hour, from 45% to 70 % within 6 hours; from 75% to 95 % within 16 hours as measured by USP Apparatus I (basket) at 100 rpm, in 1000 mL of 0.1N HCl (1.2 pH) for the first hour, in 1000 mL of 4.5 pH acetate buffer for the 2 hours and subsequently in 1000 mL of 6.8 pH phosphate buffer.

10. The stable controlled release pharmaceutical dosage form according to any one of claims 1 to 8, wherein said dosage form provides a dissolution of quetiapine or pharmaceutically acceptable salt thereof from 50% to 60 % (by wt) of quetiapine or pharmaceutically acceptable salt thereof released after 2 hours, from 60% to 70 % (by wt) after 4 hours; from 65% to 80 % (by wt) of quetiapine or pharmaceutically acceptable salt thereof released after 8 hours, from 70% to 80 % (by wt) of quetiapine or pharmaceutically acceptable salt thereof released after 12 hours, and over 75 % (by wt) of quetiapine or pharmaceutically acceptable salt thereof released after 16 hours, as measured by USP Apparatus I (basket) method at 200 rpm, at 1000 ml aqueous buffer pH 1.2 from 0 to 2 hours and pH 6.8 from 4 to 20 hours at 37°C.