CLAIMS

1. A sustained-release injectable composition containing naltrexone, the composition comprising microparticles, wherein the microparticles comprise naltrexone and a biodegradable polymer and have a value of 120 to 320 as calculated by the following Equation 1:

[Equation 1]

AUC_{inf}/C_{max}

wherein

AUC_{inf} (ng*hr/ml) is the area under the plasma concentration-time curve, obtained by administering microparticles containing naltrexone to a beagle dog by injection and measuring the plasma concentration of naltrexone, and

C_{max} (ng/ml) is the maximum plasma concentration of naltrexone, measured after administering the microparticles containing naltrexone to the beagle dog by injection, and

wherein the microparticles have a value of 0.8 to 1.2 as calculated by the following Equation 2:

[Equation 2]

$$\frac{D90-D50}{D50-D10}$$

wherein

D10 is the particle diameter corresponding to 10% in the cumulative size distribution of particles,

D50 is the particle diameter corresponding to 50% in the cumulative size distribution of particles, and

D90 is the particle diameter corresponding to 90% in the cumulative size distribution of particles.

2. The sustained-release injectable composition according to claim 1, containing more than 240 mg to less than 310 mg of naltrexone.

3. The sustained-release injectable composition according to claim 1, wherein the biodegradable polymer is selected from the group consisting of polylactic acid, polylactide, polylactic-co-glycolic acid, polylactide-co-glycolide (PLGA), polyphosphazine, polyiminocarbonate, polyphosphoester, polyanhydride, polyorthoester, polycaprolactone, polyhydroxyvalate, polyhydroxybutyrate, polyamino acid, and combinations thereof.

4. The sustained-release injectable composition according to claim 1, wherein the microparticles comprise naltrexone and the biodegradable polymer at a weight ratio of 1:1 to 1:10.

5. The sustained-release injectable composition according to claim 1, which is to be administered by injection, releases naltrexone continuously for one month by controlling the release rate of naltrexone at a target site.

6. The sustained-release injectable composition according to claim 1, further containing a suspending solvent.

7. A method for producing a sustained-release injectable composition containing naltrexone, the method comprising steps of:

1) preparing an oil phase solution by dissolving naltrexone and a biodegradable polymer in a mixed solvent comprising at least two organic solvents;

2) preparing a water phase solution by dissolving a surfactant in water;

3) producing microparticles containing naltrexone using the oil phase solution and the water phase solution, and

4) mixing the microparticles with a suspending solvent,

wherein the microparticles have a value of 120 to 320 as calculated by the following Equation 1:

[Equation 1]

AUC_{inf}/C_{max}

wherein

AUC_{inf} (ng*hr/ml) is the area under the plasma concentration-time curve, obtained by administering microparticles containing naltrexone to a beagle dog by injection and measuring the plasma concentration of naltrexone, and

C_{max} (ng/ml) is the maximum plasma concentration of naltrexone, measured after administering the microparticles containing naltrexone to the beagle dog by injection, and

wherein the microparticles have a value of 0.8 to 1.2 as calculated by the following Equation 2:

[Equation 2]

$$\frac{D90-D50}{D50-D10}$$

wherein

D10 is the particle diameter corresponding to 10% in the cumulative size distribution of particles,

D50 is the particle diameter corresponding to 50% in the cumulative size distribution of particles, and

D90 is the particle diameter corresponding to 90% in the cumulative size

distribution of particles.

8. The method according to claim 7, wherein the mixed solvent comprises a first solvent and a co-solvent, wherein the first solvent is dichloromethane.

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9. The method according to claim 8, wherein the first solvent and the co-solvent are comprised at a weight ratio of 1:0.5 to 1:10.