CLAIMS

1. Use of a co-crystal of (rac)-tramadol·HCl and celecoxib in the manufacture of a medicament for reducing the abuse liability of tramadol.

2. The use according to claim 1, wherein the molecular ratio between the (rac)-tramadol·HCl and celecoxib is 1:1.

3. The use according to any one of claims 1 or 2 comprising (rac)-tramadol·HCl and celecoxib in a molecular ratio of 1:1, characterized in that the co-crystal shows a Powder X-Ray Diffraction pattern with at least one of the peaks [2θ] selected from 7.1, 9.3, 10.2, 10.7, 13.6, 13.9, 14.1, 15.5, 16.1, 16.2, 16.8, 17.5, 18.0, 19.0, 19.5, 19.9, 20.5, 21.2, 21.3, 21.4, 21.8, 22.1, 22.6, 22.7, 23.6, 24.1, 24.4, 25.2, 26.1, 26.6, 26.8, 27.4, 27.9, 28.1, 29.1, 29.9, 30.1, 31.1, 31.3, 31.7, 32.5, 32.8, 34.4, 35.0, 35.8, 36.2 and 37.2[°], with the 2θ values being obtained using copper radiation ($Cu_{K\alpha1}$ 1.54060Å).

4. The use according to any one of claims 2 or 3, characterized in that the co-crystal shows a Powder X-Ray Diffraction pattern with peaks [2θ] at 14.1, 16.8, 19.0 and 22.7[°], with the 2θ values being obtained using copper radiation (CuKα1 1.54060Å).

5. The use according to claim 4, characterized in that the co-crystal shows additional peaks [2θ] at 7.1, 19.9 and 20.5[°].

6. The use according to claim 5, characterized in that the co-crystal shows additional peaks [2θ] at 13.6, 13.9, 17.5, 18.0, 19.5, 21.2, 21.3, 21.8, 22.6, 23.6, 24.1, 24.4 and 26.1 [°].

7. The use according to any one of claims 1 to 6 comprising (rac)-tramadol·HCl and celecoxib in a molecular ratio of 1:1, characterized in that the co-crystal shows a Powder X-Ray Diffraction pattern with peaks [2θ] selected from at 7.1, 9.3, 10.2, 10.7, 13.6, 13.9, 14.1, 15.5, 16.1, 16.2, 16.8, 17.5, 18.0, 19.0, 19.5, 19.9, 20.5, 21.2, 21.3, 21.4, 21.8, 22.1, 22.6, 22.7, 23.6, 24.1, 24.4, 25.2, 26.1, 26.6, 26.8, 27.4, 27.9, 28.1, 29.1, 29.9, 30.1, 31.1, 31.3, 31.7, 32.5, 32.8, 34.4, 35.0, 35.8, 36.2 and 37.2[°], with the 2θ values being obtained using copper radiation ($Cu_{K\alpha1}$ 1.54060Å).

8. The use according to any one of claims 1 to 7 comprising (rac)-tramadol·HCl and celecoxib in a molecular ratio of 1:1, characterized in that the co-crystal shows a Fourier

Transform Infra Red pattern with absorption bands at 3481.6 (m), 3133.5 (m), 2923.0 (m), 2667.7 (m), 1596.0 (m), 1472.4 (m), 1458.0 (m), 1335.1 (m), 1288.7 (m), 1271.8 (m), 1168.7 (s), 1237.3 (m), 1168.7 (s), 1122.6 (s), 1100.9 (m), 1042.2 (m), 976.8 (m), 844.6 (m), 820.1 (m), 786.5 (m) 625.9 (m) cm^{-1}.

9. The use according to any one of claims 1 to 8 comprising (rac)-tramadol·HCl and celecoxib in a molecular ratio of 1:1, characterized in that the co-crystal has an orthorhombic unit cell with the following dimensions:

a = 11.0323(7) Å
b = 18.1095(12) Å
c = 17.3206(12) Å.

10. The use according to any one of claims 1 to 9 comprising (rac)-tramadol·HCl and celecoxib in a molecular ratio of 1:1, characterized in that for the co-crystal the endothermic sharp peak corresponding to the melting point has an onset at 164°C.

11. The use according to any one of claims 1 to 10 wherein the co-crystal is comprised in a pharmaceutical composition also comprising at least a solubility enhancer polymer; wherein the solubility enhancer polymer is selected from polyvinyl caprolactam-polyvinyl acetate-polyethylene glycol graft copolymer or from copovidone, povidone, cyclodextrin, polyethylene glycol and lauroyl macrogol-32 glycerides EP, preferably wherein the solubility enhancer polymer is selected from polyvinyl caprolactam-polyvinyl acetate-polyethylene glycol graft copolymer or other hydrophilic polymers selected from copovidone, or povidone, most preferably wherein the solubility enhancer polymer is copovidone.