

*Supplementary Information*

**Modulation of morphology and efficacy of new CB1 receptor antagonist  
using simple and benign polymeric additives**

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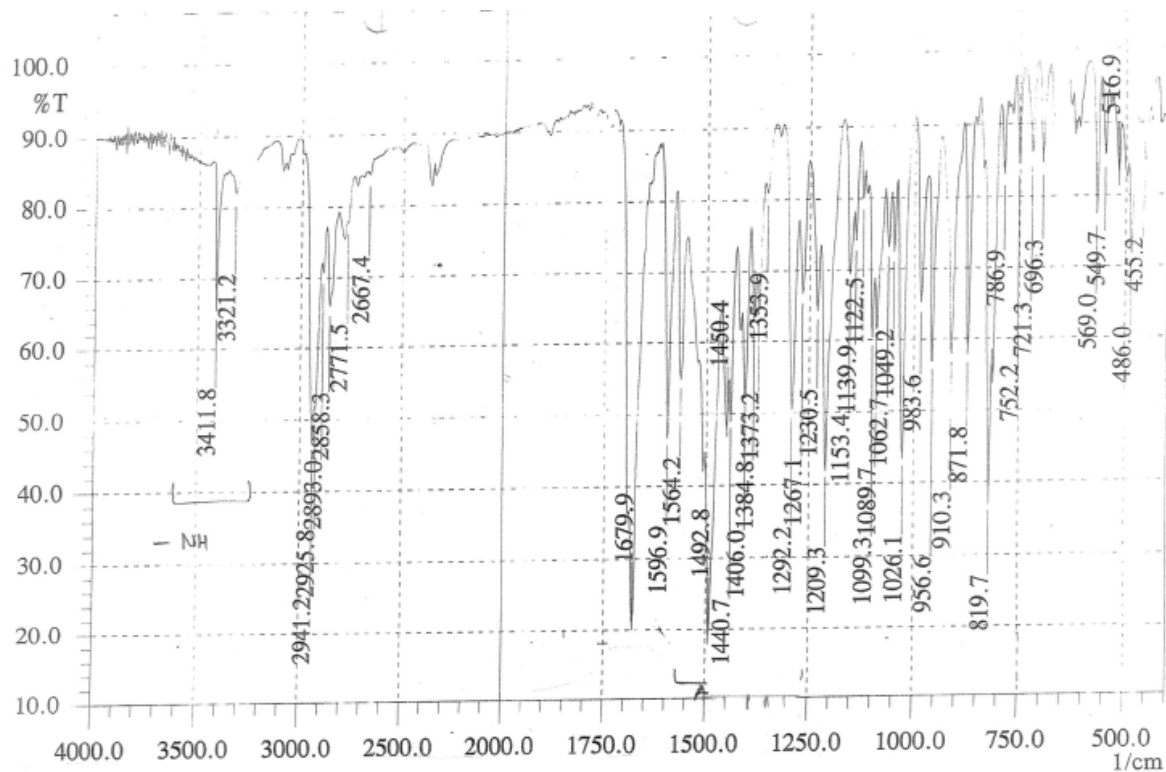
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**Table S1: Crystal data and structure refinement Compound 1**

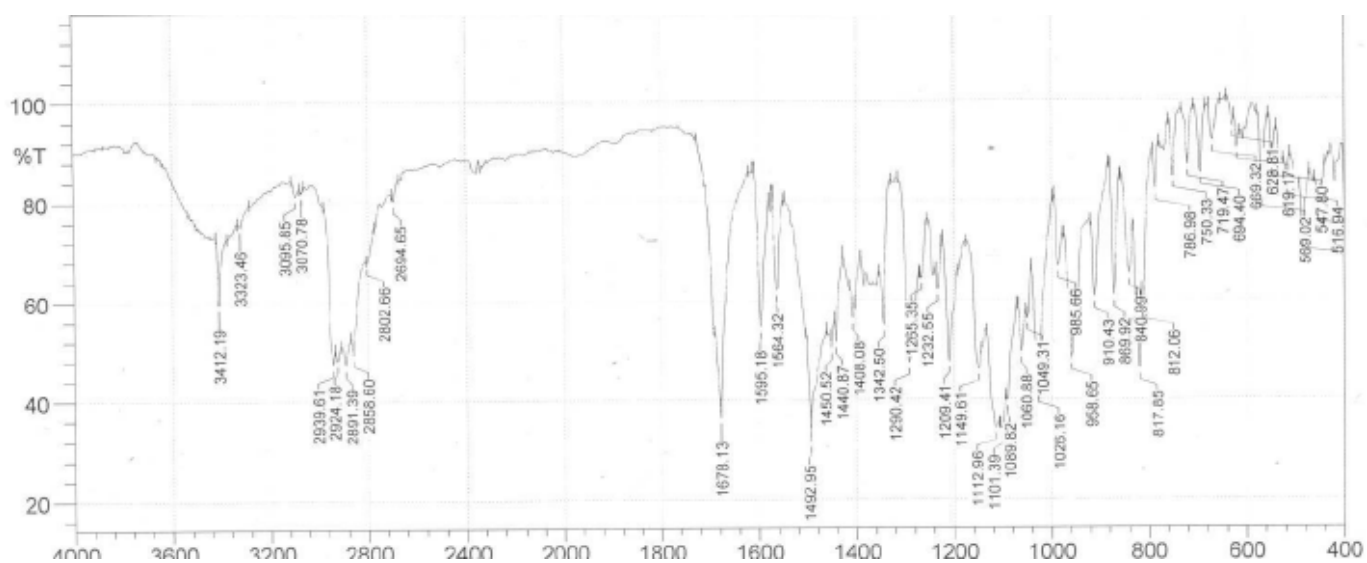
CCDC No.	<b>1529818</b>
Empirical formula	C <sub>23</sub> H <sub>21</sub> Cl <sub>3</sub> N <sub>4</sub> O <sub>2</sub>
Formula weight	491.79
Temperature/K	293
Crystal system	Triclinic
Space group	P-1
a/Å	5.7671(7)
b/Å	15.0887(19)
c/Å	15.937(2)
α/°	66.830(12)
β/°	81.991(11)
γ/°	82.059(10)
Volume/Å <sup>3</sup>	1257.2(3)
Z	2
ρ <sub>calc</sub> /g/cm <sup>3</sup>	1.299
μ/mm <sup>-1</sup>	0.391
F(000)	508.0
Crystal size/mm <sup>3</sup>	0.12 × 0.05 × 0.05
Radiation	MoKα (λ = 0.71073)
2θ range for data collection/°	6.392 to 52.742
Index ranges	-7 ≤ h ≤ 7, -17 ≤ k ≤ 18, -18 ≤ l ≤ 19
Reflections collected	8636
Independent reflections	5114 [R <sub>int</sub> = 0.0288, R <sub>sigma</sub> = 0.0618]
Data/restraints/parameters	5114/0/289
Goodness-of-fit on F <sup>2</sup>	0.925
Final R indexes [I ≥ 2σ (I)]	R <sub>1</sub> = 0.0620, wR <sub>2</sub> = 0.1621
Final R indexes [all data]	R <sub>1</sub> = 0.0987, wR <sub>2</sub> = 0.1910
Largest diff. peak/hole / e Å <sup>-3</sup>	0.59/-0.38

Figure S1: IR spectra of Compound 1 and polymeric adducts (1C-1E)

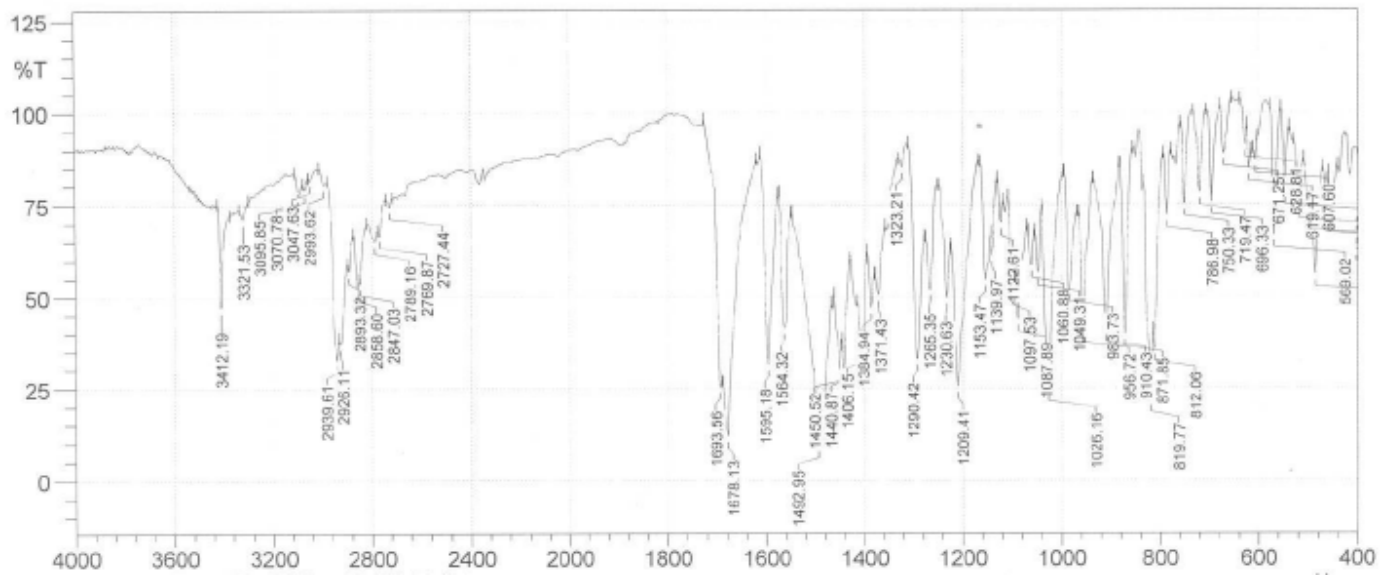
A) 1



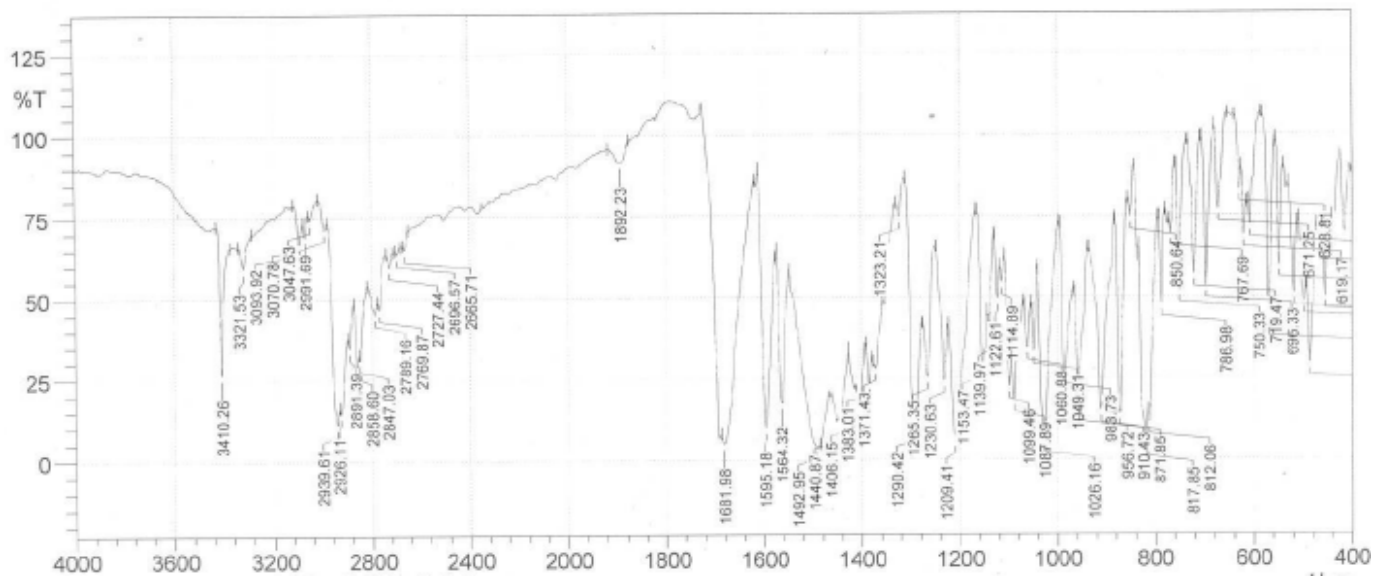
B) 1C (1+ PEG4000)



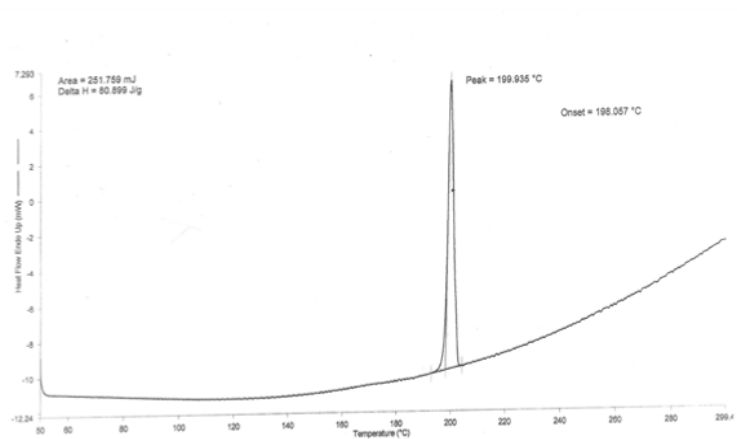
### C) 1D (1 + PVA)



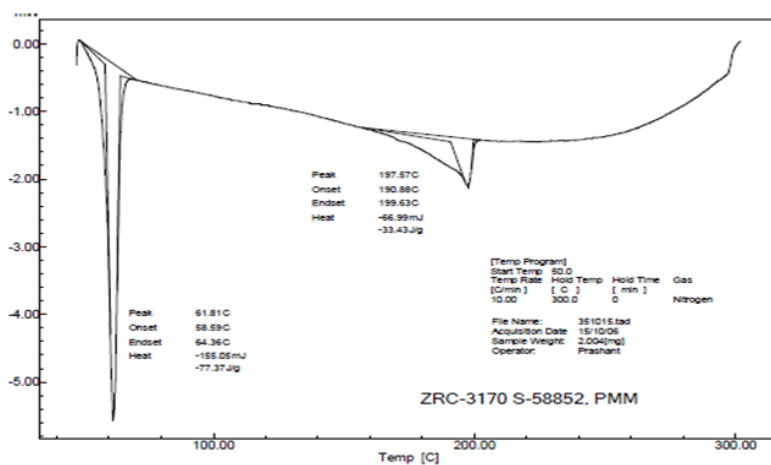
### D) 1E (1 +PVP K30)



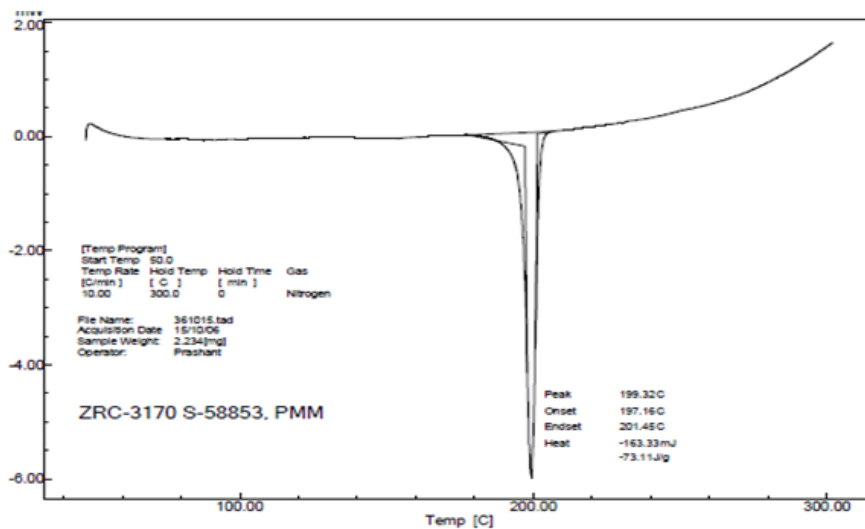
**Figure S2: Thermal analysis of compound 1 in absence and presence of polymeric additives (1C-1E)**



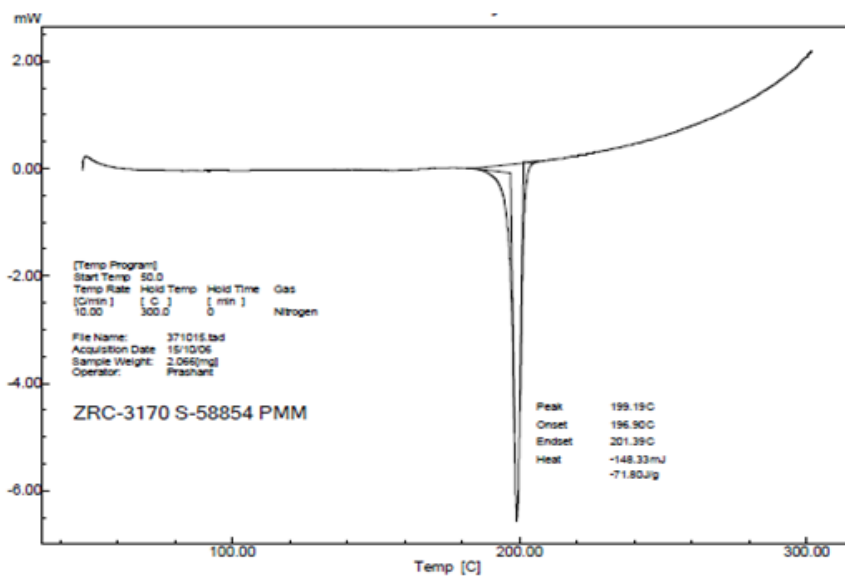
(a)



(b)



(c)



(d)

**FigureS2:** DSC endotherm of (a) compound **1** and (b) with PEG-4000, (c) with PVA & (d) PVPK-30

**TableS2:** List of five highest intensity peaks in Powder X-ray Diffractogram of compound (1) and its polymer additives ( in their decreasing order of intensity)

<b>Compounds</b>		<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>
<b>1</b>	2 $\theta$	6.350	17.800	24.050	6.650	21.660
	d-value	13.9075	4.9789	3.6973	13.2808	4.0995
<b>1C</b>	2 $\theta$	18.240	6.450	6.820	21.560	19.080
	d-value	4.8597	13.6921	12.9501	4.1183	4.6476
<b>1D</b>	2 $\theta$	6.890	21.570	17.690	18.280	13.770
	d-value	12.8187	4.1164	5.0096	4.8492	6.4256
<b>1E</b>	2 $\theta$	6.930	21.500	17.610	19.960	18.240
	d-value	12.7448	4.1297	5.0321	4.4447	4.8597