Quercetin amorphous solid dispersions prepared by hot melt extrusion with enhanced solubility and intestinal absorption

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Fig. S1 IR spectra of Que, excipients, Que ASDs and physical mixtures (PM) in the range 500-4000 cm^{-1}.

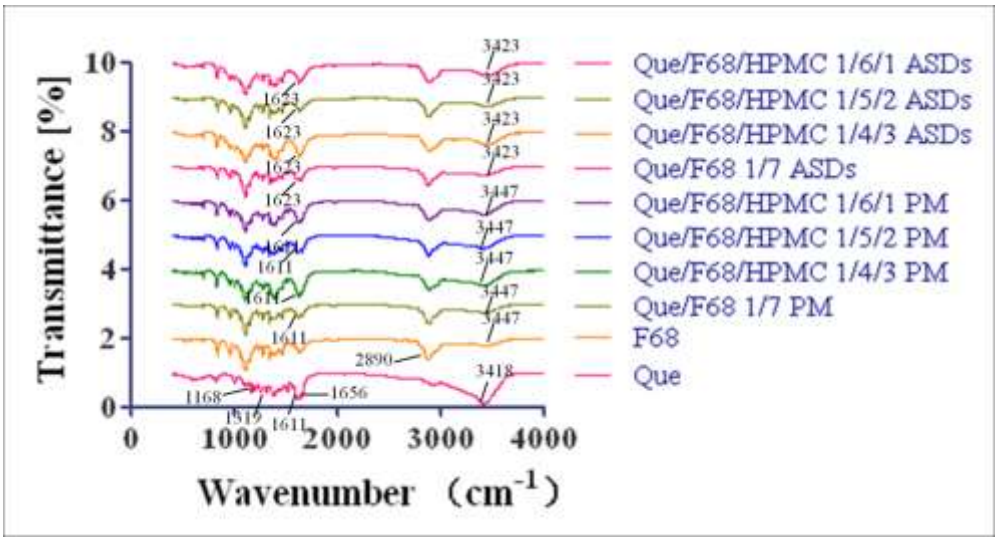

Fig. S2 Raman spectra of Que, excipients, Que ASDs and physical mixtures (PM) in the range 1000-1800 cm^{-1}. a: Que; b: HPMC; c: F68; d: Que-F68 1/7 PM; e: Que-F68 1/7 ASDs; f: Que-F68/HPMC 6/1 PM; g: Que-F68/HPMC 6/1 ASDs; h: Que-F68/HPMC 5/2 PM; i: Que-F68/HPMC 5/2 ASDs; j: Que-F68/HPMC 4/3 PM; k: Que-F68/HPMC 4/3 ASDs.

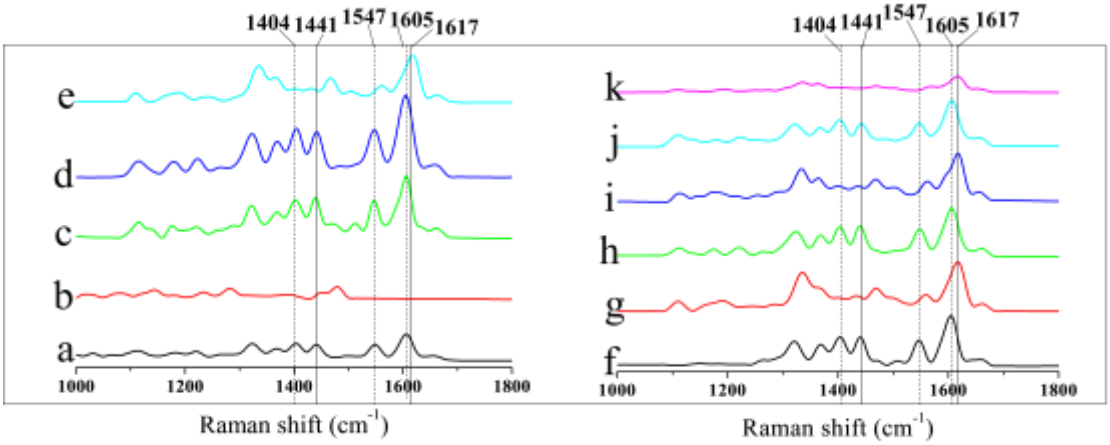

Fig. S3 XRD patterns of Que, excipients, Que ASDs and physical mixtures (PM) from 5° to 30°. A(1): Que-F68 1/7 PM; A(2): Que-F68 1/7 ASDs; B(1): Que-F68/HPMC 6/1 PM; B(2): Que-F68/HPMC 6/1 ASDs; C(1): Que-F68/HPMC 5/2 PM; C(2): Que-F68/HPMC 5/2 ASDs; D(1): Que-F68/HPMC 4/3 PM; D(2): Que-F68/HPMC 4/3 ASDs

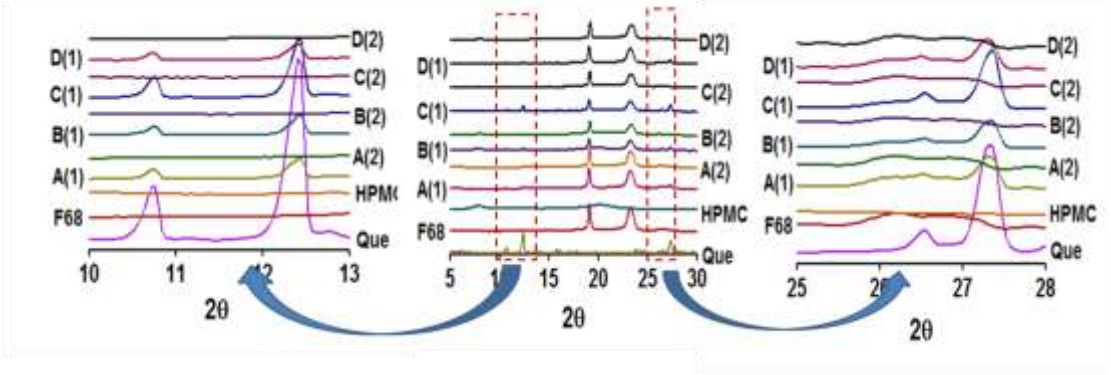

Table S1 The wavenumbers and intensity of selected bands from the IR and Raman spectra of Que, F68, Que ASDs and physical mixtures (PM).

Bands	Que		F68		Que-F68 1/7 PM		Que-F68/HPMC 6/1 PM		Que-F68/HPMC 5/2 PM		Que-F68/HPMC 4/3 PM		Que-F68 1/7 ASDs		Que-F68/HPMC 6/1 ASDs		Que-F68/HPMC 5/2 ASDs		Que-F68/HPMC 4/3 ASDs	
	IR	Raman	IR	Raman	IR	Raman	IR	Raman	IR	Raman	IR	Raman	IR	Raman	IR	Raman	IR	Raman	IR	Raman
v(-OH)	3418		3447		3447		3447		3447		3447		3423		3423		3423		3423	
v(C=O)	1611				1611		1611		1611		1611		1629		1629		1629		1629	
v(C2=C3)		1605				1605		1605		1605		1605		1617		1617		1617		1617
δ(C5–OH)		1547				1547		1547		1547		1547		I.D.		I.D.		I.D.		I.D.
δ (CH(A))		1441				1441		1441		1441		1441		I.D.		I.D.		I.D.		I.D.
δ(C5, 7-OH)		1404				1404		1404		1404		1404		I.D.		I.D.		I.D.		I.D.
v(-OH)	1199				1199		1199		1199		1199		N.D.		N.D.		N.D.		N.D.	

N.D.: No detect; I.D.: Intensity decrease