Supporting information

Evaluation of synthon influence on ethenzamide-polyphenol pharmaceutical cocrystals

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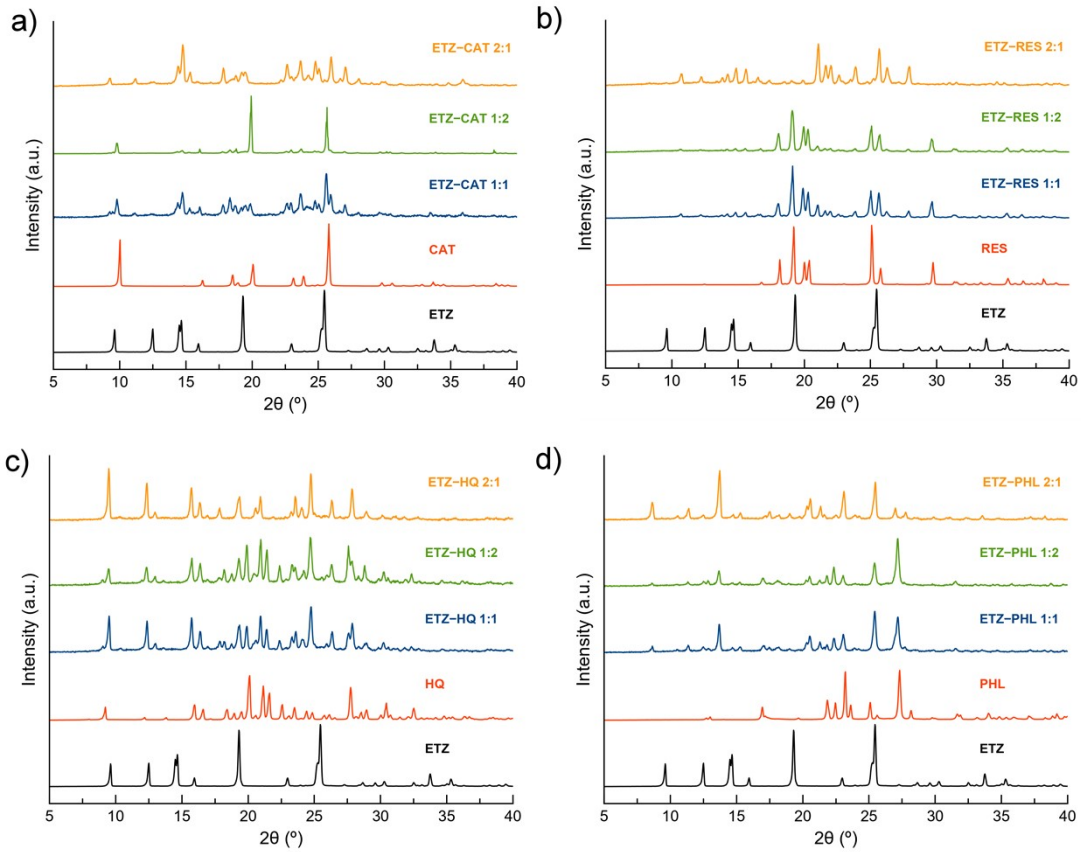

Fig. S1 Powder X-ray diffraction patterns of the product obtained by liquid-assisted grinding (LAG).

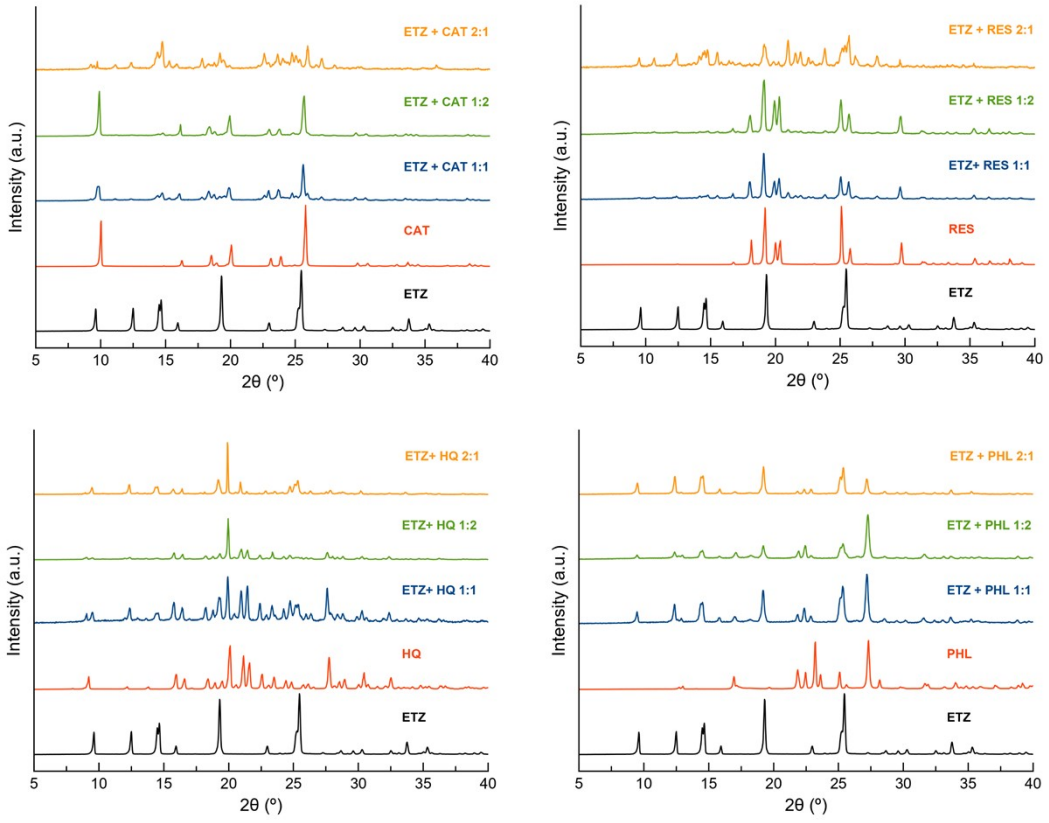

Fig. S2 Powder X-ray diffraction patterns of the products obtained by neat grinding in different stoichiometric ratios.

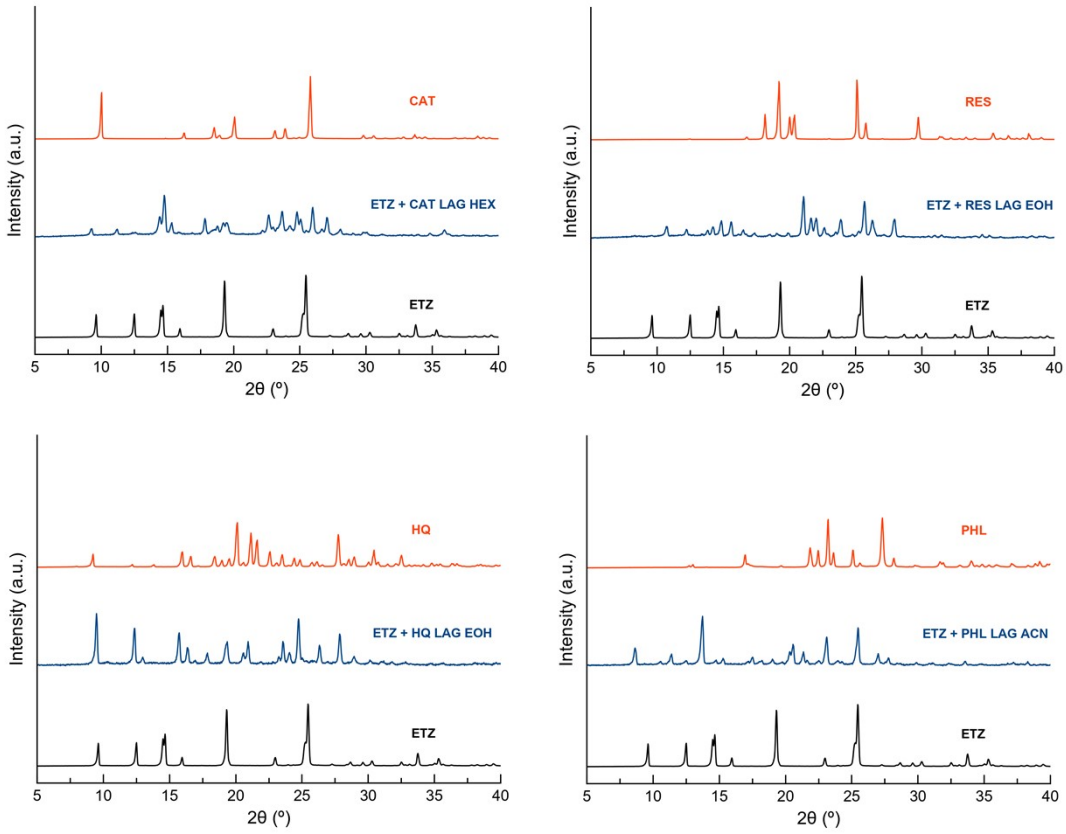

Fig. S3 Powder X-ray diffraction patterns of the products obtained by liquid-assisted grinding (LAG) in selected solvents at 2:1 stoichiometric ratio.

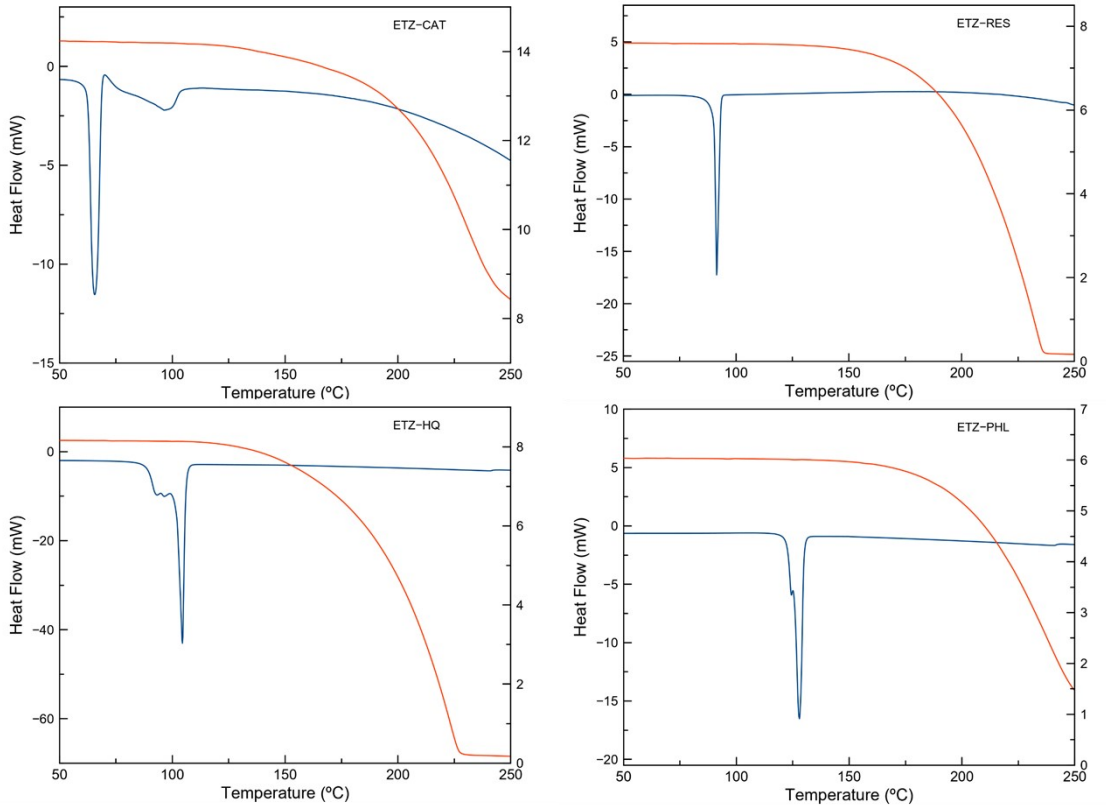

Fig. S4 Differential scanning calorimetry (DSC) and thermogravimetric (TG) traces of the ETZ cocrystals.

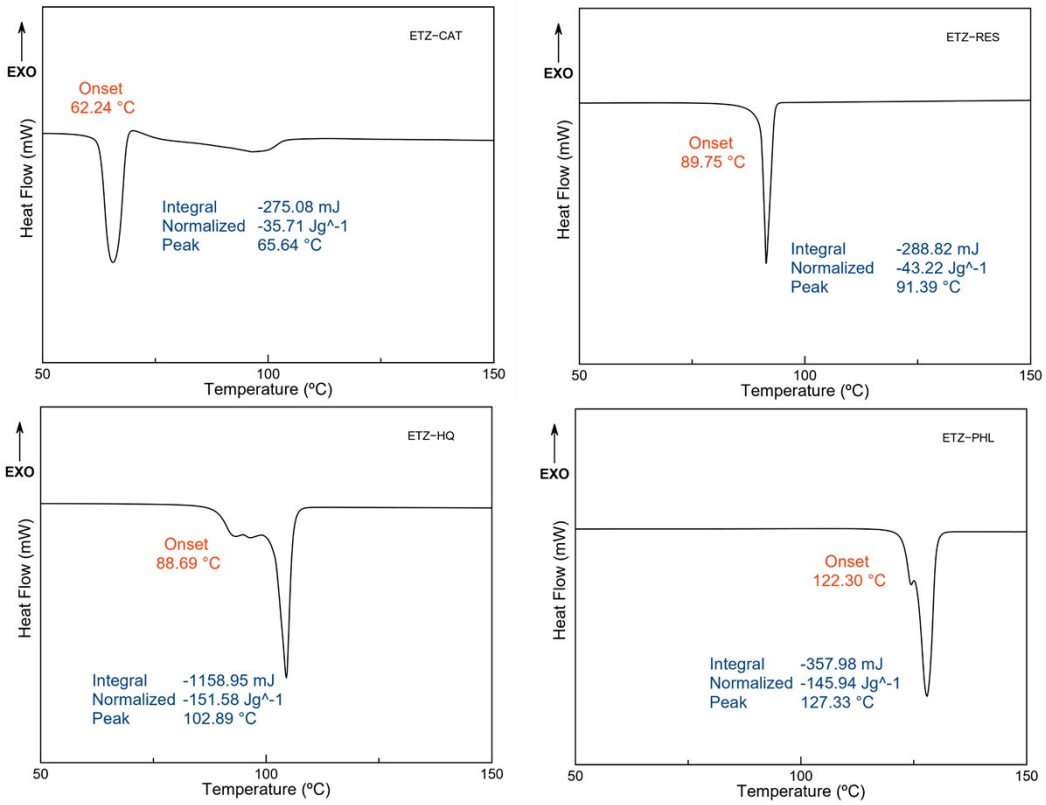

Fig. S5 DSC traces of novel cocrystals with the corresponding onsets and enthalpies values.

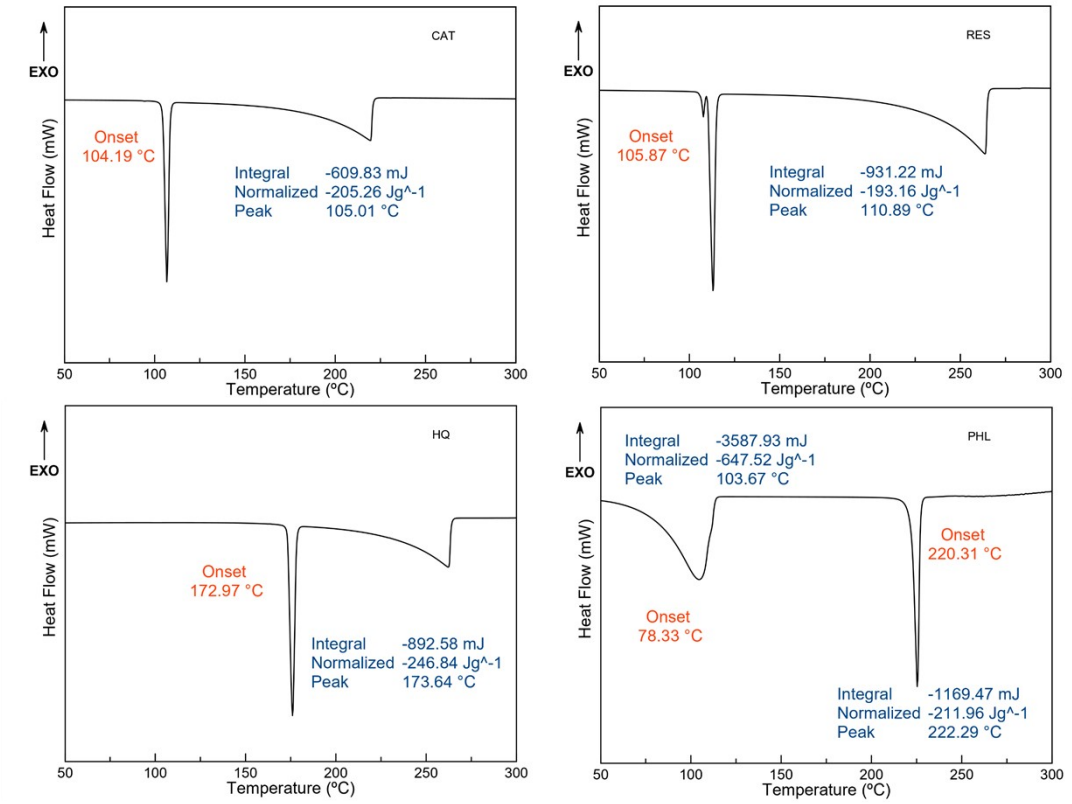

Fig. S6 DSC of isolated coformers CAT, RES, HQ and PHL used in this work with the corresponding onsets and enthalpies values.

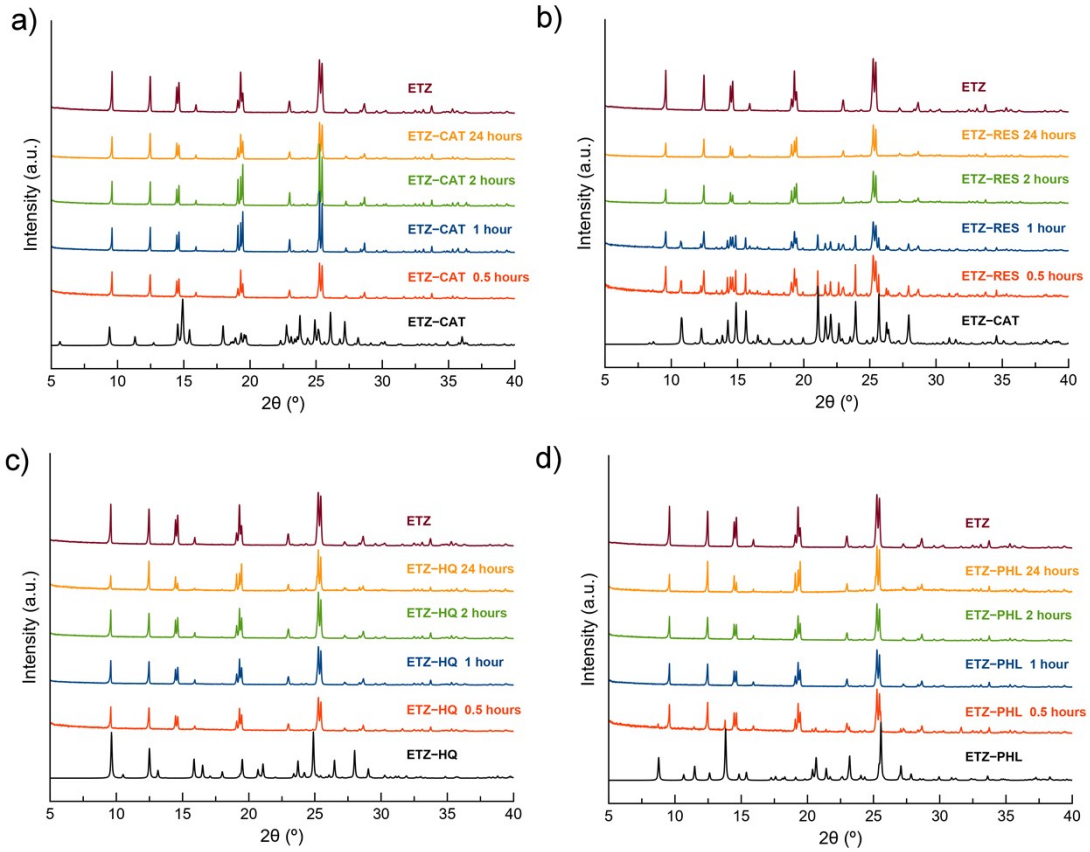

Fig. S7 PXRD patterns of the reported ETZ cocrystals after aqueous slurry experiments (pH 6.8 phosphate buffer medium) for 24 hours.

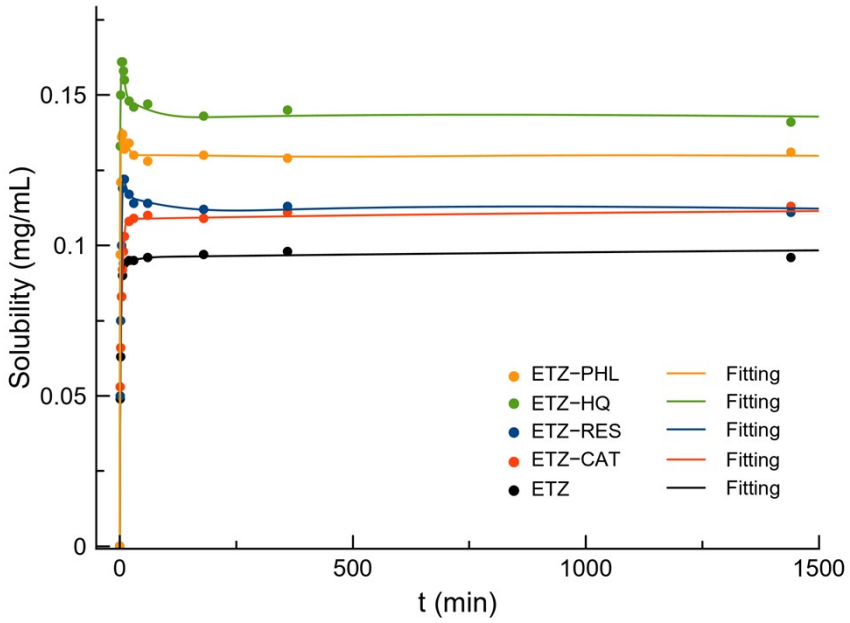

Fig. S8 Dissolution profile of ETZ and cocrystals at 24 h (1440 min).

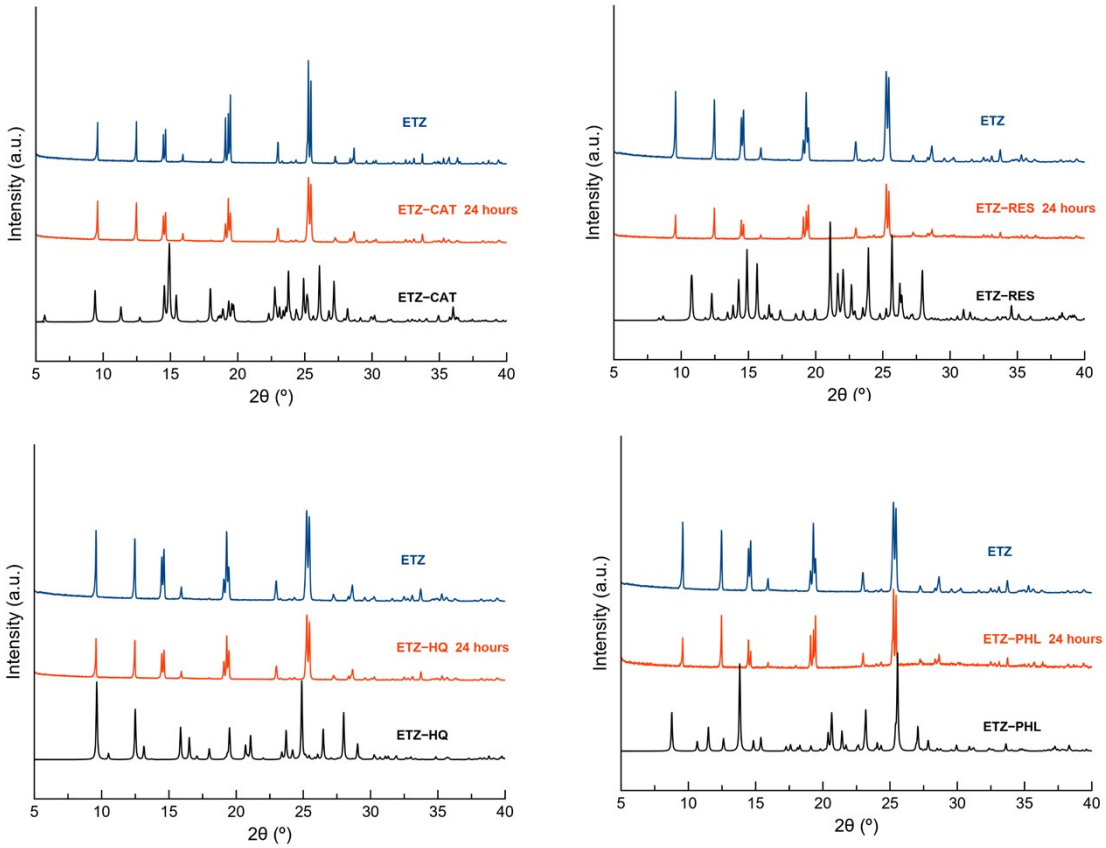

Fig. S9 PXRD patterns of the reported ETZ cocrystals after powder dissolution experiments (pH 6.8 phosphate buffer medium, 24 hours).

Table 1. Hydrogen bonds for ETZ cocrystals [Å and deg.].

ETZ—CAT	D-H···A	d(D-H)	d(H···A)	d(D···A)	<(DHA)
	N(1)-H(1A)···O(3)#1	0.86	2.23	3.084(3)	171.3
	N(1)-H(1B)···O(2)	0.86	1.99	2.649(3)	133.2
	N(2)-H(2A)···O(1)#2	0.86	2.03	2.879(3)	168.1
	N(2)-H(2B)···O(4)	0.86	1.98	2.622(3)	131.0
	O(5)-H(5A)···O(3)	0.82	1.90	2.715(2)	172.1
	O(6)-H(6A)···O(1)	0.82	1.87	2.687(2)	173.0
	Symmetry transformations used to generate equivalent atoms:				
	#1 x-1,y+1,z #2 x+1,y-1,z				
ETZ—RES	D-H···A	d(D-H)	d(H···A)	d(D···A)	<(DHA)
	N(1)-H(1A)···O(3)#1	0.86	2.12	2.9807(15)	176.5
	N(1)-H(1B)···O(2)	0.86	1.97	2.6369(14)	134.0
	N(2)-H(2A)···O(1)#2	0.86	2.17	2.9603(16)	152.8
	N(2)-H(2B)···O(4)	0.86	1.97	2.6418(14)	134.0
	O(5)-H(5A)···O(1)#2	0.82	1.89	2.6886(15)	165.9
	O(6)-H(6A)···O(3)#3	0.82	1.94	2.7550(14)	171.8
	Symmetry transformations used to generate equivalent atoms:				
	#1 x,-y+3/2,z-1/2 #2 x,-y+3/2,z+1/2 #3 -x+2,y-1/2,-z+3/2				
ETZ—HQ	D-H···A	d(D-H)	d(H···A)	d(D···A)	<(DHA)
	N(1)-H(1A)···O(3)#1	0.86	2.18	2.9861(15)	156.2
	N(1)-H(1B)···O(2)	0.86	1.97	2.6488(14)	134.4
	O(3)-H(3A)···O(1)	0.82	1.84	2.6642(13)	178.0
	Symmetry transformations used to generate equivalent atoms:				
	#1 -x,-y+1,-z				
ETZ—PHL	D-H···A	d(D-H)	d(H···A)	d(D···A)	<(DHA)
	N(1)-H(1A)···O(3)#1	0.86	2.08	2.919(4)	165.9
	N(1)-H(1B)···O(2)	0.86	1.94	2.611(4)	134.2
	N(2)-H(2A)···O(1)#2	0.86	2.07	2.933(4)	177.3
	N(2)-H(2B)···O(4)	0.86	1.95	2.623(4)	134.0
	O(5)-H(5A)···O(1)#3	0.82	1.85	2.653(3)	167.7
	O(6)-H(6A)···O(3)#1	0.82	1.86	2.664(3)	168.5
	O(7)-H(7)···O(5)#4	0.82	2.02	2.833(3)	169.4
	Symmetry transformations used to generate equivalent atoms:				
	#1 x+1/2,-y+1,z-1/2 #2 x-1/2,-y+1,z+1/2 #3 x,y-1,z #4 x+1/2,-y,z+1/2				