Electronic Supplementary Material (ESI) for RSC Advances

SUPPORTING INFORMATION

Dextrin cross linked with poly (HEMA): A novel hydrogel for colon specific delivery of ornidazole.

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Table S1 Drug release kinetics parameters.

Hydrogels	Zero order	First order	Higuchi model	Hixon-Crowell model	Korsemeyar-Peppas model		Kopcha model		
	(R^2)	(R^2)	(R^2)	(R^2)	R^2	n	R^2	A	B
pH: 6.8									
Dextrin	0.9695	0.9724	0.9880	0.9695	0.9051	0.79	0.9990	2.74	0.10
Dxt-g-p(HEMA) 1	0.8751	0.9871	0.9810	0.8751	0.9050	0.79	0.9430	1.45	0.09
Dxt-g-p(HEMA) 2	0.9643	0.9825	0.9970	0.9643	0.9721	0.88	0.9836	0.70	0.11
Dxt-g-p(HEMA) 3	0.8886	0.9875	0.9860	0.8886	0.9122	0.87	0.9476	0.87	0.11
Dxt-g-p(HEMA) 4	0.9699	0.9972	0.9987	0.9699	0.9937	0.84	0.9999	0.65	0.10
Dxt-g-p(HEMA) 5	0.9689	0.9940	0.9968	0.9689	0.9980	0.87	0.9992	0.51	0.10
Dxt-g-p(HEMA) 6	0.9534	0.9792	0.9912	0.9534	0.9717	0.87	0.9667	0.71	0.10
Dxt-g-p(HEMA) 7	0.9319	0.9840	0.9893	0.9319	0.9624	0.87	0.9779	0.75	0.11
pH: 7.4									
Dextrin	0.9626	0.9923	0.9960	0.9903	0.9967	0.53	0.9979	5.75	6.25
Dxt-g-p(HEMA) 1	0.9775	0.9929	0.9933	0.9775	0.9954	0.52	0.9907	1.95	2.03
Dxt-g-p(HEMA) 2	0.9536	0.9865	0.9883	0.9536	0.9975	0.54	0.9905	2.40	2.56
Dxt-g-p(HEMA) 3	0.9783	0.9984	0.9943	0.9783	0.9973	0.48	0.9925	1.57	1.72
Dxt-g-p(HEMA) 4	0.9423	0.9827	0.9824	0.9423	0.9877	0.52	0.9948	1.26	1.35
Dxt-g-p(HEMA) 5	0.9757	0.9931	0.9907	0.9757	0.9911	0.46	0.9921	1.65	1.96
Dxt-g-p(HEMA) 6	0.9532	0.9872	0.9881	0.9532	0.9977	0.54	0.9949	2.11	2.32
Dxt-g-p(HEMA) 7	0.9800	0.9976	0.9950	0.9800	0.9992	0.46	0.9918	2.16	2.39

Table S2: Stability study result. Each value represent mean ± SD (n=3)

Sl. No	Parameters	Ornidazole	
		Initial	3 Month
1	Description	Complies	Complies
2	Average weight (mg)	1010.67 ± 11.43	1021.56 ± 12.27
3	Content assay (%)	98.85 ± 3.45	98.08 ± 3.98
4	*In-vitro* release in pH 1.2 2 h	 3.70 ± 0.51	 4.03 ± 0.63
5	*In-vitro* release in pH 6.8 3 h 5 h	 23.20 ± 1.75 38.61 ± 1.80	 21.80 ± 1.95 39.63 ± 1.72
6	*In-vitro* release in pH 7.4 6 h 8 h 10 h 12 h 14 h 16 h 18 h	 42.03 ± 2.00 50.50 ± 1.75 54.59 ± 1.85 58.03 ± 1.94 62.23 ± 1.80 65.45 ± 2.16 68.70 ± 1.98	 43.72 ± 2.15 48.25 ± 1.56 53.20 ± 1.85 59.65 ± 2.05 64.10 ± 1.80 66.52 ± 1.78 70.21 ± 1.92

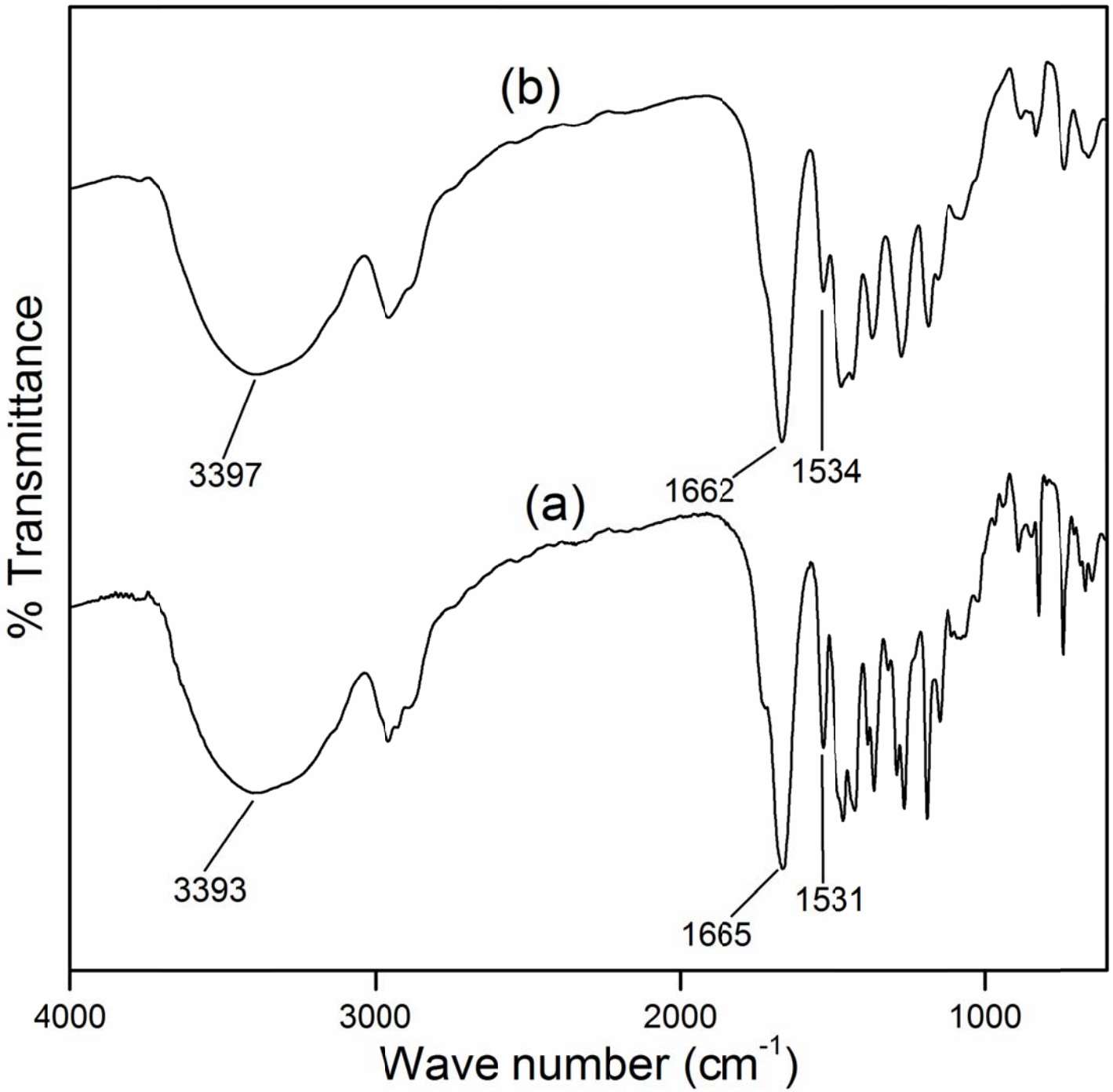

Fig. S1. FTIR analysis of triturated form of ornidazole tablet [using Dxt-g-p (HEMA) 5 hydrogel] (a) initial and (b) after 3 months.

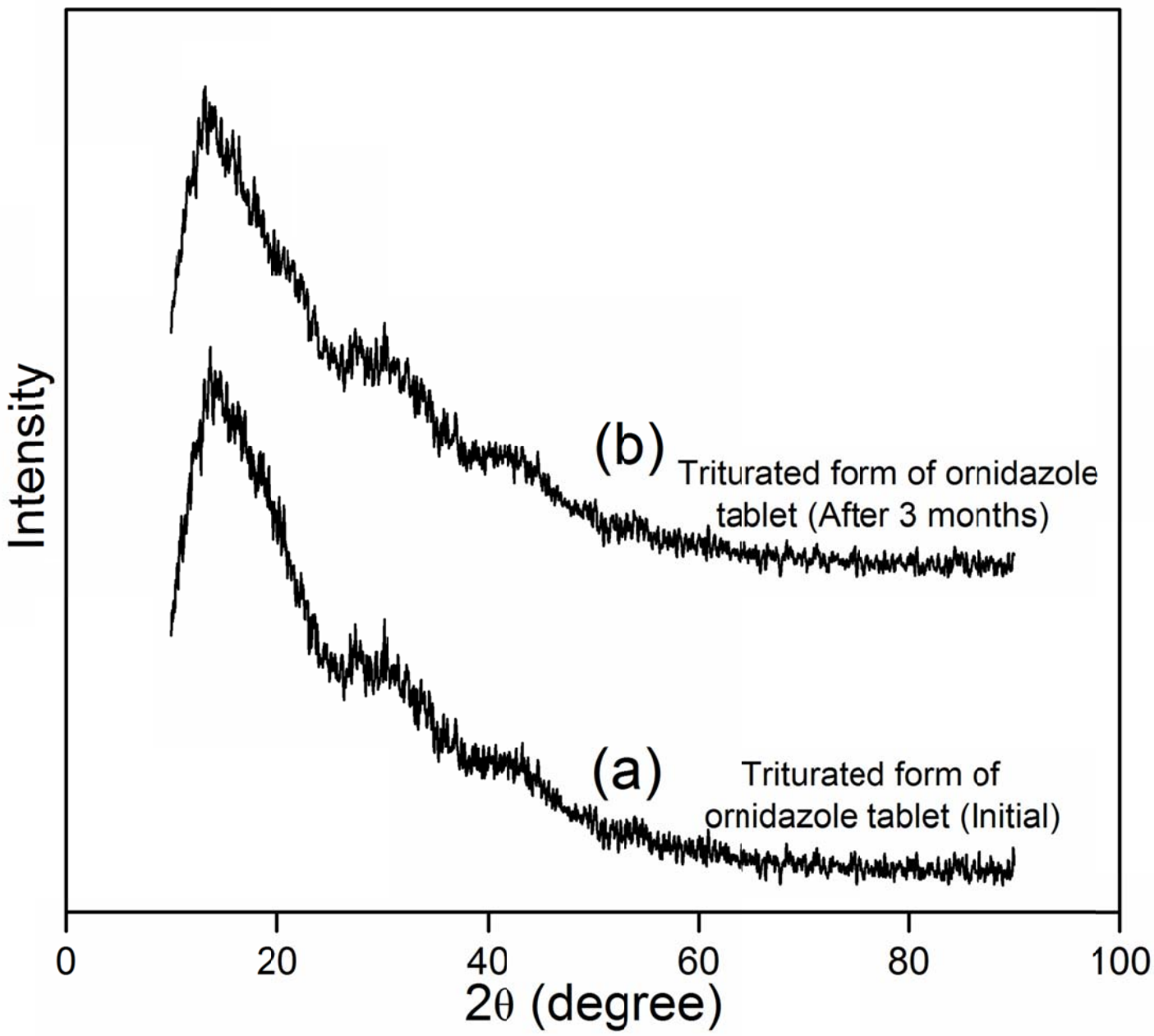

Fig. S2. XRD analysis of triturated form of ornidazole tablet [using Dxt-g-p (HEMA) 5 hydrogel] (a) initial and (b) after 3 months.

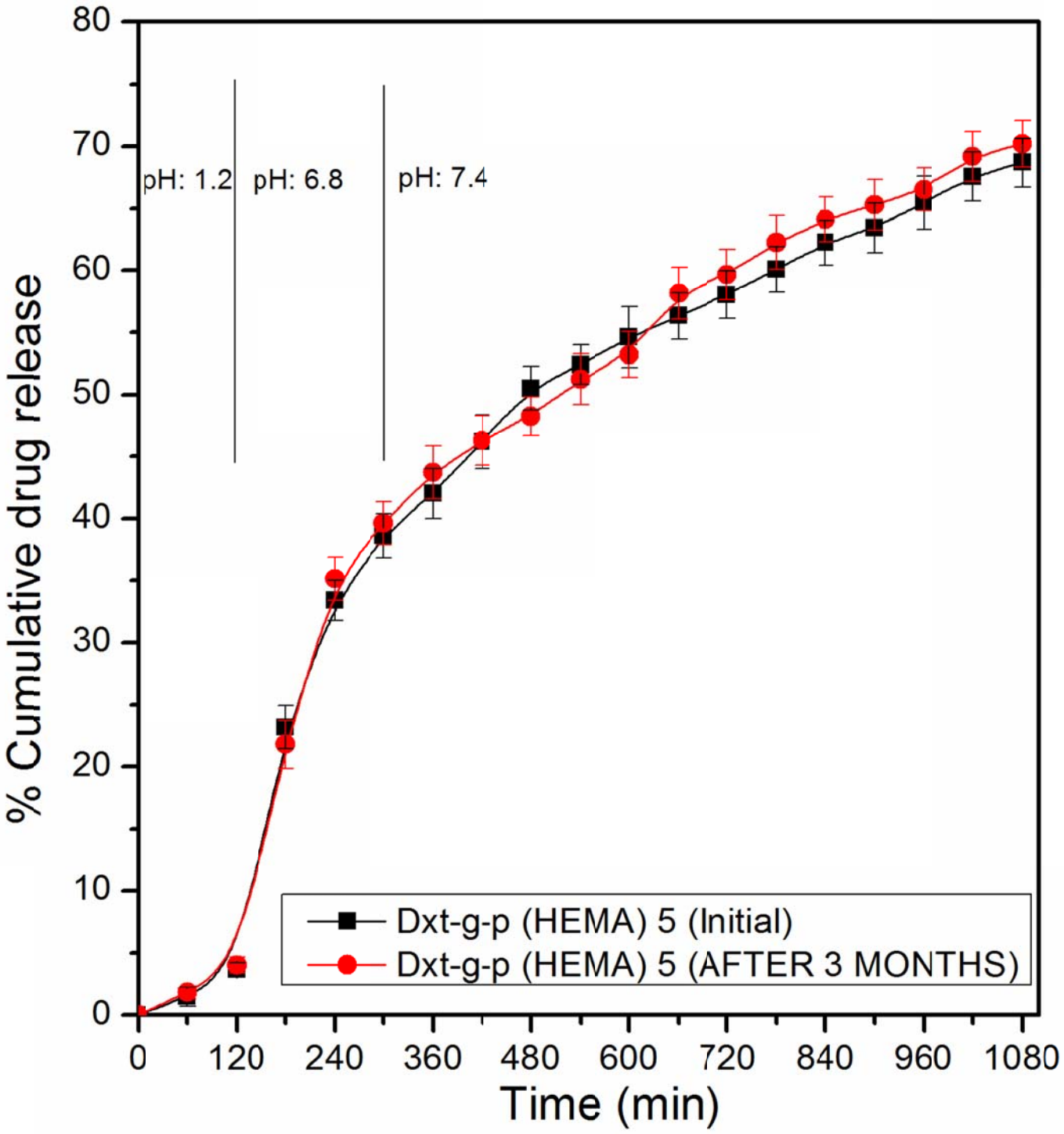

Fig. S3: Ornidazole release behaviour of Dxt-g-p (HEMA) based tablet (a) initially, and (b) after 3 months.