

Table 1
 Laboratory-manufactured tablet composition.

Chemical	Role	w/w	Grade	Manufacturer
Sulforhodamine B (Sigma)	Model compound	2.6	75% Purity	Sigma-Aldrich, Dorset, UK
Lactose (SuperTab 14SD)	Filler	91.4	Ph. Eur	DFE Pharma, Goch, Germany
Sodium starch glycolate (Explotab CLV)	Superdisintegrant	3.0	Typ (A) Ph. Eur	Mendell GmbH, Volklingen, Germany
Croscarmellose sodium (Ac-Di-Sol)	Superdisintegrant	2.0	Ph. Eur	FMC Biopolymer, Girvan, UK
Magnesium stearate	Lubricant	1.0	Technical Grade	Sigma-Aldrich, Dorset, UK

Table 2

Physical characteristics of orally disintegrating tablets using United States Pharmacopoeia methods.

Tablet	SRB tablets		Sybedia Flashtab placebo tablets	
Manufacturer	Laboratory-manufactured		Ethylpharm	
	Average + standard deviation	n	Average + standard deviation	n
Height (mm)	4.52 ± 0.08	10	2.09 ± 0.06	10
Width (mm)	5.98 ± 0.02	10	3.69 ± 0.02	10
Diameter (mm)	8.088 ± 0.004	10	8.147 ± 0.006	10
Weight (mg)	330 ± 1	10	150 ± 2	10
Hardness (N)	39 ± 3	10	23 ± 1	10
Tensile Strength (MPa)	0.53 ± 0.04	10	0.50 ± 0.03	10
Disintegration time (s)	30 ± 2	6	23 ± 2	6

n: number of samples; tensile strength was calculated assuming right cylindrical tablet geometry (U.S. Pharmacopoeial Convention, 2014b)

Table 3
 Average disintegration times for each tablet in various media using texture analysis disintegration testing.

	SRB tablets		Sybedia Flashtab placebo tablets	
	Average disintegration time (s) ± standard deviation	n	Average disintegration time (s) ± standard deviation	n
Water	82 ± 7	8	23 ± 4	5
Bovine milk	336 ± 2	3	88 ± 7	5
Human milk	122 ± 9	4	81 ± 4	5

n: number of samples