

## Supplementary material

**Table S1.** Summary of results for validation parameters of the HPLC-DAD method at pH 1.2, pH 4.5 and pH 6.8

Parameter	Dissolution and permeability studies		
	pH 1.2	pH 4.5	pH 6.8
Selectivity			
Peak symmetry factor (0.8-1.5 required)	1.3	1.1	1.1
Absence of interfering substances	confirmed	confirmed	confirmed
Limit of detection, LOD [mg mL <sup>-1</sup> ]	0.0014	0.0003	0.0004
Limit of quantification, LOQ [mg mL <sup>-1</sup> ]	0.0042	0.0011	0.0013
Linearity $y = ax + b$			
$a \pm S_a$	143.89±2.55	58.76±3.06	60.78±1.39
$b \pm S_b$	insignificant	insignificant	insignificant
Correlation coefficient ( $r$ )	0.9998	0.9981	0.9997
Range of linearity [mg mL <sup>-1</sup> ]	0.006 – 0.068	0.001 – 0.006	0.002 – 0.021
Accuracy			
Recovery (95-105% requires) [%]	101.4	97.6	97.5
Precision			
Concentration [mg mL <sup>-1</sup> ]	0.0680	0.0060	0.0210
Average of 6 injections [mg mL <sup>-1</sup> ]	0.0689	0.0059	0.0205
SD	0.0017	0.0002	0.0003
RSD (<5% required) [%]	2.47	3.39	1.46

where  $S_D$  is the average of standard deviations of determinations in the lower range of linearity and  $a$  is the directional coefficient of the plotted linear function;  $S_a$  standard deviation of slope;  $S_b$  standard deviation of intercept,  $t$ , calculated values of Student's t-test,  $t_{\alpha,t} = 2.228$  critical values of Student's test for degrees of freedom  $f = 10$  and significance level  $\alpha = 0.05$ .