

Supplementary Data

Stability Indicating Method to Analyze Benidipine and Chlorthalidone Using HPLC Technique: Establishment, Validation and Application to Tablets

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Table S1. Ruggedness data of benidipine and chlorthalidone

Injection no.	Benidipine	Chlorthalidone	Benidipine	Chlorthalidone
	Analyst 1		Analyst 2	
1	3384265	8648624	3375924	8654932
2	3395620	8636951	3365206	8626548
3	3392265	8626518	3375934	8643921
4	3375962	8626519	3385314	8545006
5	3385163	8645630	3375024	8654193
6	3395324	8626185	3395624	8642604
Mean	3388100	8635071	3378838	8627867
SD*	7703.870	10236.818	10402.029	41876.408
RSD**	0.227	0.119	0.308	0.485
	Instrument 1		Instrument 2	
1	3385132	8616529	3375924	8635219
2	3383165	8649521	3292954	8526593
3	3395218	8629516	3378218	8545205
4	3380624	8646259	3298930	8563195
5	3395138	8620654	3313021	8645200
6	3389320	8632159	3369004	8626024
Mean	3388100	8632440	3338009	8590239
SD*	6176.432	13292.282	40488.325	51253.742
RSD**	0.182	0.154	1.213	0.597

*SD – standard deviation;**RSD – percent relative standard deviation; Instrument 1 - Waters Alliance HPLC system; Instrument 2 – Shimadzu HPLC system

Table S2. Robustness data of benidipine and chlorthalidone

Investigated value	Drug	ET	PR	PC	PA	Rs
Flow rate: optimized value - 1.0 ml/min						
0.9	Ben	4.408	3378215	6153	1.20	-
1.1	Ben	4.376	3375236	6153	1.20	-
0.9	Chl	6.560	8584921	8986	1.11	5.50
1.1	Chl	6.135	8585630	8986	1.11	5.50
Operating temperature: optimized value - 25 °C						
23	Ben	4.476	3456301	6524	1.18	-
27	Ben	4.418	3363518	6524	1.18	-
23	Chl	6.435	8649624	8433	1.12	4.99
27	Chl	6.360	8645148	8433	1.12	4.99
Methanol ratio: optimized value - 40%						
35	Ben	4.604	3379075	6906	1.20	-
45	Ben	4.312	3376316	6969	1.19	-
35	Chl	6.545	8586663	8697	1.12	5.30
45	Chl	6.191	8586831	8697	1.11	5.30
pH: optimized value - 4.5						
4.3	Ben	4.448	3428207	6877	1.19	-
4.7	Ben	4.416	3380228	6889	1.21	-
4.3	Chl	6.406	8647881	8645	1.11	5.16
4.7	Chl	6.393	8646605	8602	1.12	5.24
Detection wavelength: optimized value - 260 nm						
258	Ben	4.634	3428851	6932	1.19	-
262	Ben	4.625	3382437	6903	1.19	-
258	Chl	6.452	8934345	8659	1.12	5.02
262	Chl	6.447	8293064	8627	1.12	5.02

Ben – benidipine; Chl – chlorthalidone; ET – elution time; PR – Peak area response;

PC – plate count; PA – peak asymmetry; Rs – resolution

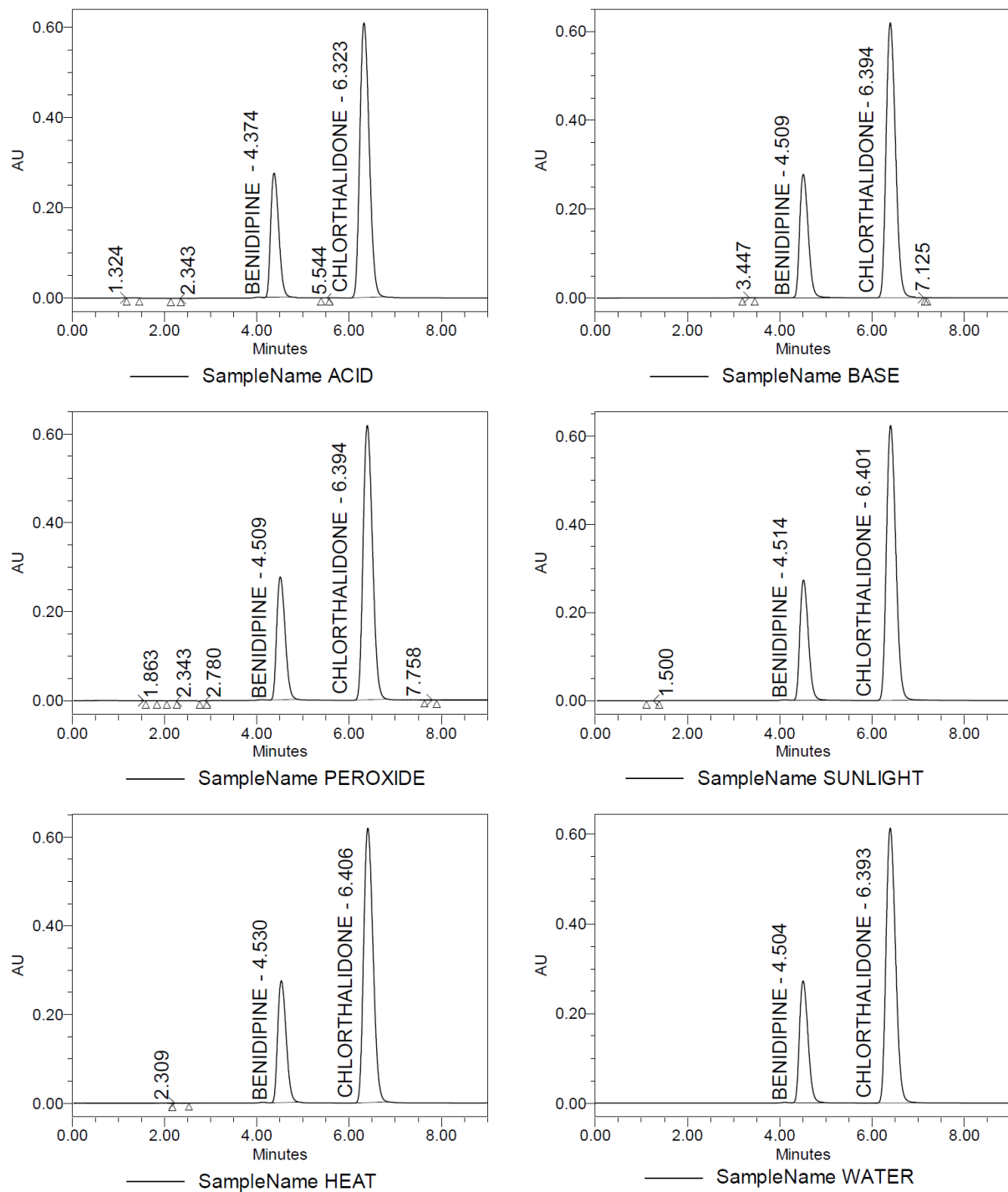


Figure S1. Chromatograms obtained during specificity or stability indicating test