
Supplementary Materials: Validation of a Rapid and Easy-to-Apply Method to Simultaneously Quantify Co-Loaded Dexamethasone and Melatonin PLGA Microspheres by HPLC-UV: Encapsulation Efficiency and In Vitro Release

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Table S1. Robustness results expressed in average recovery percentages of six WS-EE and WS-IVR regarding changes in different analysts performing the test. Level line referred to low (5 and 2.5 $\mu\text{g mL}^{-1}$ respectively for procedures A and B), medium (20 and 7.5 $\mu\text{g mL}^{-1}$ respectively for procedures A and B) and high (40 and 15 $\mu\text{g mL}^{-1}$ respectively for procedures A and B) concentration levels.

		Procedure A						Procedure B					
		MEL			DX			MEL			DX		
	Level	Low	Medium	High	Low	Medium	High	Low	Medium	High	Low	Medium	High
Analyst 1	Average	98.76	100.41	100.58	101.45	97.75	98.62	102.08	101.94	101.59	101.64	100.95	100.48
	RSD %	1.16	0.75	0.35	1.01	0.48	0.36	0.72	0.45	0.98	1.07	1.51	0.86
Analyst 2	Average	100.08	101.31	100.54	102.14	98.87	98.58	99.14	100.36	98.97	97.85	101.67	100.75
	RSD %	0.93	0.73	0.16	0.89	0.43	0.16	0.76	0.22	0.42	1.36	1.05	0.60
RSD (%) MEL total procedure A								1.05					
RSD (%) DX total procedure A								1.76					
RSD (%) MEL total procedure B								1.42					
RSD (%) DX total procedure B								1.66					
Average tR (RSD %) MEL analyst 1								2.88 (0.21)					
Average tR (RSD %) DX analyst 1								4.65 (0.14)					
Average tR (RSD %) MEL analyst 2								2.88 (0.16)					
Average tR (RSD %) DX analyst 2								4.66 (0.23)					
Average pS (RSD %) MEL analyst 1								1.28 (1.11)					
Average pS (RSD %) DX analyst 1								1.36 (1.26)					
Average pS (RSD %) MEL analyst 2								1.30 (1.68)					
Average pS (RSD %) DX analyst 2								1.36 (1.88)					
Procedure A								Procedure B					

Table S2. Robustness results expressed in average recovery percentages of six WS-EE and WS-IVR regarding changes in HPLC-UV equipment. Level line referred to low (5 and 2.5 µg mL⁻¹ respectively for procedures A and B), medium (20 and 7.5 µg mL⁻¹ respectively for procedures A and B) and high (40 and 15 µg mL⁻¹ respectively for procedures A and B) concentration levels.

		Procedure A						Procedure B					
		MEL			DX			MEL			DX		
	Level	Low	Medium	High	Low	Medium	High	Low	Medium	High	Low	Medium	High
Equipment 1	Average	103.80	100.64	100.00	101.21	100.46	99.96	98.65	102.35	103.16	98.30	100.44	100.88
	RSD %	0.78	0.35	0.28	0.27	0.32	0.28	0.31	0.37	0.20	0.72	0.29	0.17
Equipment 2	Average	102.45	98.68	99.11	99.47	101.46	101.71	101.61	98.92	100.20	101.93	99.92	99.48
	RSD %	0.23	0.21	0.24	0.94	0.73	0.19	0.74	0.43	1.09	0.88	0.19	0.38
RSD (%) MEL total procedure A								1.86					
RSD (%) DX total procedure A								0.96					
RSD (%) MEL total procedure B								1.79					
RSD (%) DX total procedure B								1.24					
Average tR (RSD %) MEL equipment 1							2.87 (0.17)					2.96 (0.23)	
Average tR (RSD %) DX equipment 1							4.66 (0.22)					4.77 (0.31)	
Average tR (RSD %) MEL equipment 2							2.77 (0.13)					2.82 (0.22)	
Average tR (RSD %) DX equipment 2							4.48 (0.21)					4.45 (0.17)	
Average pS (RSD %) MEL equipment 1							1.25 (0.98)					1.44 (1.25)	
Average pS (RSD %) DX equipment 1							1.31 (1.09)					1.41 (0.88)	
Average pS (RSD %) MEL equipment 2							1.24 (1.78)					1.42 (1.66)	
Average pS (RSD %) DX equipment 2							1.33 (1.18)					1.39 (0.74)	
Procedure A				Procedure B									