

Table S1:ANOVA (showing lack of fit calculation) for the selected antibiotics using the proposed HPLC and HPTLC methods

method	Comp.	Source of variation	Sum of squares	degree of freedom	Mean sum of squares	F-Ratio
HPLC	LV	Total	2.27×10^{11}	6	1.08×10^{10}	1.90
		Regression	2.27×10^{11}	1	1.14×10^{11}	
		Residual	1.2×10^7	5	6.2×10^5	
		Replicate	2.7×10^6		3.9×10^5	
		Lack of fit	9.04×10^6		7.5×10^5	
	MX	Total	2.28×10^{11}	6	1.08×10^{10}	2.73
		Regression	2.28×10^{11}	1	1.14×10^{11}	
		Residual	2.47×10^7	5	1.3×10^6	
		Replicate	4.35×10^6		6.2×10^5	
		Lack of fit	2.03×10^7		1.7×10^6	
	GM	Total	3.36×10^9	6	1.6×10^8	1.18
		Regression	3357348790	1	1678674395	
		Residual	20816.0137	5	1095.579669	
		Replicate	6887		983.8571	
		Lack of fit	13929.01		1160.751	
HPTLC	GM	Total	3.1×10^9	6	149283887	3.40
		Regression	3.1×10^9	1	1.567×10^9	
		Residual	487375.9	5	25651.36	
		Replicate	71164		1066.29	
		Lack of fit	416211.9		34684.33	
	LV	Total	9.87×10^9	6	4.7×10^8	0.78
		Regression	9.87×10^9	1	4.9×10^9	
		Residual	6.3×10^5	5	3.3×10^4	
		Replicate	2.7×10^5		3.86×10^4	
		Lack of fit	3.6×10^5		3.02×10^4	
	MX	Total	4.7×10^9	6	2.2×10^8	0.16
		Regression	4.7×10^7	1	2.4×10^9	
		Residual	2.5×10^5	5	1.3×10^4	
		Replicate	1.96×10^5		2.8×10^4	
		Lack of fit	5.5×10^4		4.6×10^3	

The critical value of F-Ratio is 3.57 at $\alpha = 0.05$

Table S2: Determination of LV,MX and GM (mixture) in laboratory-prepared mixtures using the proposed A)HPLC and B) HPTLC methods.

Method	A	% Recovery					
	Mix. No.						
		LV	MX	GM	LV	MX	GM
A)HPLC	1	10.0	10.0	10.0	100.4	98.3	99.9
	2	0.5	0.5	0.5	98.8	97.9	98.9
	3	10.0	1.0	5.0	97.3	100.2	100.2
	4	15.0	5.0	1.0	98.1	101.6	100.9
	5	8.0	3.0	2.0	97.5	97.9	98.8
	6	1.0	15.0	15.0	99.1	98.9	98.9
	7	15.0	1.0	1.0	98.7	100.7	99.9
	8	10.0	15.0	1.0	100.9	96.5	97.8
				Mean	98.85	99.00	99.41
				± S.D.	1.28	1.70	0.99
		MX	LV	GM	MX	LV	GM
B)HPTLC	1	2.0	2.0	3.0	101.5	99.7	98.8
	2	0.5	0.1	0.1	99.7	98.3	97.9
	3	0.2	0.5	1.0	101.3	101.9	98.2
	4	1.0	1.0	2.0	99.4	101.5	96.8
	5	2.0	0.3	0.3	98.9	99.8	99.1
	6	0.5	0.2	3.0	98.9	99.9	101.8
	7	1.0	1.0	1.0	102.5	101.3	98.1
	8	0.1	0.5	0.5	100.1	98.8	101.5
				Mean	100.29	100.15	99.03
				± S.D.	1.33	1.30	1.76

Table S3: Application of standard addition technique to the analysis of the studied antibiotics using the proposed HPLC and HPTLC methods.

Method	Compound	Claimed conc. (μgml^{-1})	Added conc. (μgml^{-1})	% Recovery of added	Method	Compound	Added conc ($\mu\text{g}/\text{band}$)	Claimed conc ($\mu\text{g}/\text{band}$)	Added conc ($\mu\text{g}/\text{band}$)
HPLC	LV	1.5	2.0	98.4	HPTLC	MX	1.0	0.2	101.4
		0.5	1.0	100.5			0.1	1.0	103.7
		4.0	1.0	98.5			0.5	0.8	100.8
		6.0	4.0	99.7			1.0	0.5	100.2
		8.0	7.0	100.2			0.3	0.2	100.0
		15.0	10.0	98.9			0.2	0.7	99.9
		Mean ^a		99.29			Mean ^a		101.00
		\pm S.D. ^a		0.84			\pm S.D. ^a		1.30
	MX	0.1	0.4	98.7		LV	1.0	0.2	100.14
		0.8	0.2	97.1			0.1	1.0	99.7
		3.5	1.5	102.4			0.5	0.8	99.4
		5.0	5.0	99.6			1.0	0.5	99.2
		10.0	5.0	100.5			0.3	0.2	101.6
		20.0	5.0	99.6			0.2	0.7	99.3
		Mean ^a		99.70			Mean ^a		99.89
		\pm S.D. ^a		1.60			\pm S.D. ^a		0.82
	GM	0.4	0.1	95.3		GM	1.0	0.2	99.1
		0.5	0.5	101.8			0.1	1.0	99.7
		1.5	0.5	99.8			0.5	0.8	97.6
		2.0	3.0	99.2			2.0	1.0	98.2
		5.0	5.0	100.8			0.3	0.2	100.3
		23.0	2.0	99.7			0.2	0.7	99.4
		Mean ^a		99.40			Mean ^a		99.01
		\pm S.D. ^a		2.02			\pm S.D. ^a		0.91

^a Mean and S.D., percentage recovery of the added amount.

Table S4: Analysis of variance for repeatability and intermediate precision for antibiotic mixture by the proposed HPLC and HPTLC methods.

Method	HPLC							HPTLC						
Comp.	Conc. Level ($\mu\text{g ml}^{-1}$)	Source of variation	Sum of squares	DF	MS	F-ratio	P-value	Conc level ($\mu\text{g /band}$)	Source of variation	Sum of squares	DF	MS	F-ratio	P-value
LV	0.1	Between	6.45	7	0.92	0.96	0.51	0.5	Between	0.88	7	0.13	0.0	0.99
		Within	7.65	8	0.96				Within	17.7	8	2.22		
		Total	14.09	15					Total	18.6	15			
	10.0	Between	34.917	7	4.988	1.78	0.217	1.0	Between	62.96	7	8.99	1.2	0.38
		Within	22.38	8	2.797				Within	57.93	8	7.24		
		Total	57.297	15					Total	120.8	15			
	25.0	Between	7.73	7	1.1	0.96	0.5	2.0	Between	8.25	7	1.18	0.8	0.56
		Within	9.16	8	1.14				Within	10.73	8	1.34		
		Total	16.88	15					Total	18.98	15			
MX	0.1	Between	1.96	7	0.28	0.39	0.88	0.5	Between	3.34	7	0.48	0.4	0.84
		Within	5.66	8	0.71				Within	8.2	8	1.03		
		Total	7.62	15					Total	11.55	15			
	10.0	Between	51.42	7	7.346	1.05	0.466	1.0	Between	55.54	7	7.9	2.0	0.17
		Within	55.755	8	6.969				Within	31.49	8	3.9		
		Total	107.17	15					Total	87.04	15			
	25.0	Between	1.87	7	0.27	0.12	0.99	2.0	Between	1.96	7	0.28	0.3	0.88
		Within	18.09	8	2.26				Within	5.66	8	0.71		
		Total	19.95	15					Total	7.62	15			
GM	0.1	Between	5.59	7	0.79	0.43	0.86	0.1	Between	1.46	7	0.21	0.3	0.92
		Within	14.7	8	1.84				Within	5.12	8	0.64		
		Total	20.29	15					Total	6.58	15			
	10.0	Between	37.27	7	5.324	0.99	0.498	1.0	Between	81.07	7	11.5	1.9	0.18
		Within	43	8	5.375				Within	47.32	8	5.9		
		Total	80.27	15					Total	128.4	15			
	25.0	Between	1.32	7	0.19	0.75	0.64	3.0	Between	0.9	7	0.13	0.1	0.98
		Within	2	8	0.25				Within	5.84	8	0.73		
		Total	3.32	15					Total	6.74	15			

Where DF is the degree of freedom and MS is the mean square.

The critical value of F-ratio is 3.5 and P-Value is 0.05.

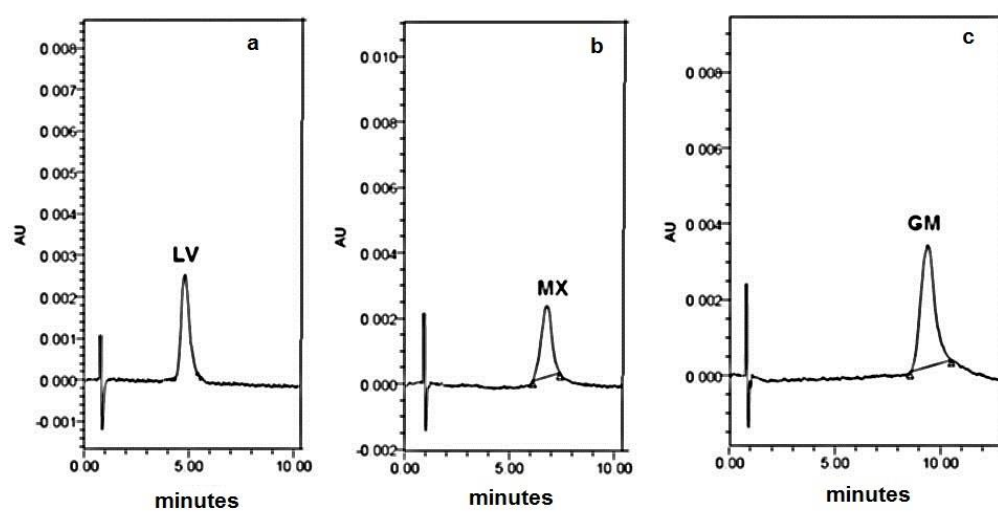


Figure S1: HPLC chromatograms of : a) Monosho ® tablets sample containing $2.5 \mu\text{g ml}^{-1}$ of LV, b) Advancrib ® tablets sample containing $2.5 \mu\text{g ml}^{-1}$ of MX, and c) Quinabiotic® tablets sample containing $2.5 \mu\text{g ml}^{-1}$ of GM, using the proposed HPLC method.

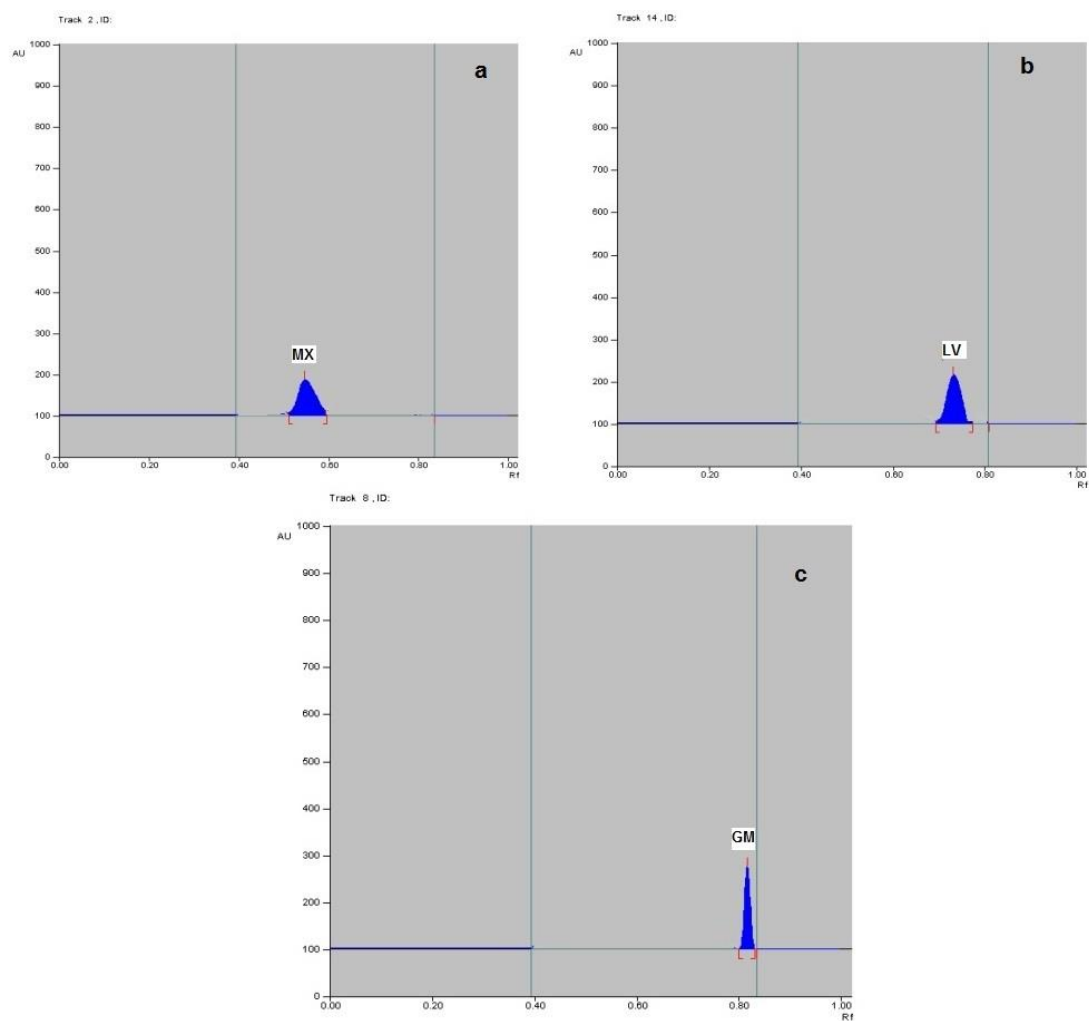


Figure S2: HPTLC densitogram of :a) Advancrib ® tablets sample containing 0.5 µg /band of MX, b) Monosho ® tablets sample containing 0.5 µg /band of LV, and c) Quinabiotic® tablets sample containing 0.6 µg /band of GM, using the proposed HPTLC method