Table S1. Analytical performance data for the determination of the studied drugs by first derivative spectrophotometric method.

Parameter	MET	ASP
Concentration range (µg/mL)	2.00-30.00	2.00-30.00
Correlation coefficient	0.9999	0.9999
Slope	0.0531	0.1014
Intercept	0.0002	-0.1431
Limit of detection (LOD) (µg/mL)	0.2998	0.3227
Limit of Quantification (LOQ) (µg/mL)	0.9084	0.9780
Standard deviation of the residuals ($S_{y/x}$)	0.0068	0.0139
Standard deviation of the intercept (S_a)	0.0048	0.0099
Standard deviation of the slope (S_b)	0.0003	0.0005
% RSD (SD x 100 / X)	0.9410	0.7870
% Error (% RSD / $\sqrt{n}$)	0.3560	0.2970

Table S2. Analytical performance data for the determination of the studied drugs by ratio first derivative spectrophotometric method.

Parameter	MET	ASP	
		$\lambda = 238.2$ nm	$\lambda = 246.0$ nm
Concentration range (µg/mL)	2.00 – 30.00		
Correlation coefficient	0.9999	0.9999	0.9999
Slope	0.1621	0.7148	0.6560
Intercept	-0.0271	-0.8316	-0.8631
Limit of detection (LOD) (µg/mL)	0.2795	0.2485	0.4173
Limit of Quantification (LOQ) (µg/mL)	0.8470	0.7530	1.2647
Standard deviation of the residuals ($S_{y/x}$)	0.0193	0.0757	0.1166
Standard deviation of the intercept (S_a)	0.0137	0.0538	0.0830
Standard deviation of the slope (S_b)	0.0008	0.0030	0.0046
% RSD (SD x 100 / X)	0.8491	0.8960	1.0852
% Error (% RSD / $\sqrt{n}$)	0.3200	0.339	0.4112

Table S3. Precision data for determination of the two studied drugs by the first derivative method.

Concentration added (µg/ml)	% Found ± SD	% RSD	% Error
MET			
Intra-day			
5.00	99.65± 0.95	0.95	0.55
15.00	100.34± 0.72	0.72	0.41
25.00	99.35± 0.91	0.91	0.53
Inter-day			
5.00	99.22±1.00	1.00	0.58
15.00	100.08± 0.68	0.67	0.39
25.00	100.23± 0.88	0.88	0.51
ASP			
Intra-day			
5.00	100.13 ± 0.86	0.86	0.50
10.00	100.18± 0.94	0.94	0.54
20.00	99.73 ± 0.61	0.61	0.35
Inter-day			
5.00	99.33± 1.07	1.08	0.62
10.00	99.71± 0.83	0.83	0.48
20.00	100.44 ± 0.68	0.68	0.39

N.B. Each result is the average of three separate determinations.

Table S4. Precision data for determination of the two studied drugs by the ratio first derivative method.

Concentration added (µg/ml)	% Found ± SD	% RSD	% Error
MET			
Intra-day			
5.00	100.22± 0.70	0.70	0.40
15.00	99.55± 0.91	0.85	0.49
25.00	99.56± 0.18	0.92	0.53
Inter-day			
5.00	99.92±1.30	1.31	0.75
15.00	99.27± 1.07	1.07	0.62
25.00	100.42± 0.85	0.85	0.49
ASP (λ=238.2nm)			
Intra-day			
8.00	99.24 ± 1.16	1.17	0.68
16.00	100.15± 0.73	0.73	0.42
24.00	100.38± 0.91	0.91	0.52
Inter-day			
8.00	99.63± 0.78	0.79	0.45
16.00	100.55 ± 0.75	0.74	0.43
24.00	99.92 ± 0.87	0.87	0.50
ASP (λ=246 nm)			
Intra-day			
8.00	99.55 ± 0.81	0.81	0.47
16.00	100.50± 1.03	1.03	0.59
24.00	99.30 ± 0.88	0.88	0.51
Inter-day			
8.00	100.13 ± 0.88	0.87	0.51
16.00	99.53 ± 0.96	0.96	0.56
24.00	99.94 ± 0.66	0.66	0.38

N.B. Each result is the average of three separate determinations.