

Table (28): Analytical data and characteristics of the proposed spectrophotometric method using RB

Parameters	HYZ	MOZ	CIZ
$\lambda_{\max}(\text{nm})$	560	570	565
Bear's law limits ($\mu\text{g ml}^{-1}$)	2.0 - 15.0	2.0 - 20.0	2.0 - 25.0
Ringbom limits ($\mu\text{g ml}^{-1}$)	3.0 - 16.0	3.0 - 22.0	3.0 - 26.0
Molar absorptivity $\times 10^4$	3.5768	2.5296	3.0860
Sandell sensitivity (ng cm^{-2})	12.520	18.330	15.615
Detection limits ($\mu\text{g ml}^{-1}$)	0.0414	0.0507	0.0657
Quantitation limits ($\mu\text{g ml}^{-1}$)	0.138	0.169	0.219
Standard Deviation	0.0138	0.0169	0.0219
Regression equation*:			
Slope (b)	0.07987	0.05453	0.06404
Intercept (a)	0.00322	0.00133	0.00391
Correlation coefficient (r)	0.999913	0.999960	0.999976
RSD**%	0.506	0.590	0.717
Stoichiometric ratio	1:1	1:1	1:1

* : With respect to $A = a + b C$ where C is concentration of drug in $\mu\text{g ml}^{-1}$ and (A) is the absorbance, (a) is the intercept, (b) is the slope, and (C) is concentration of drug in $\mu\text{g ml}^{-1}$.

* *: Average of six determinations

Table (29): Evaluation of the accuracy and precision of the proposed procedure of RB with different drugs

Drug	Taken ($\mu\text{g ml}^{-1}$)	Found* ($\mu\text{g ml}^{-1}$)	Recovery (%)	RSD ^a (%)	RE ^b (%)	Confidence ^c limits
Hydroxyzine HCl	2.00	1.98	99.0	1.18	1.24	1.98 $\pm$ 0.0246
	4.00	4.02	100.2	0.94	0.98	4.02 $\pm$ 0.0396
	6.00	5.96	99.73	0.81	0.85	5.96 $\pm$ 0.0508
Meclozine HCl	2.00	1.975	99.5	2.18	2.29	1.97 $\pm$ 0.0453
	4.00	4.04	100.50	1.10	1.15	4.04 $\pm$ 0.0466
	6.00	5.94	99.00	0.69	0.72	5.94 $\pm$ 0.0432
Cinnarizine	2.00	2.03	101.50	1.54	1.62	2.03 $\pm$ 0.0329
	4.00	3.95	98.75	1.22	1.27	3.95 $\pm$ 0.0505
	6.00	6.06	101.00	0.92	0.97	6.06 $\pm$ 0.0589

a: Relative standard deviation for six determinations

b: Relative error

c: 95% confidence limits and five degrees of freedom

Table (30): Evaluation of the accuracy and precision of the proposed and official methods for determination of the studied drugs in its pharmaceutical forms using RB

Dosage forms	Official method			Proposed method				
	Taken mg	Found* mg	Recovery (%)	Taken mg	Found* mg	Recovery (%)	t** value	F** test
Atarax 10 mg per tab	10.00	9.98	99.80	10.00	9.92	99.20	0.352	1.341
Bronchaline 10 mg per tab	10.00	9.99	99.90	10.00	9.95	99.50	0.567	2.063
Navoproxin 25 mg per tab	25.00	24.87	99.50	25.00	24.68	98.70	0.967	1.842
Vomidoxine 25 mg per tab	25.00	25.10	100.40	25.00	24.90	99.60	0.603	1.723
Ezadoxine 25 mg per tab	25.00	24.83	99.30	25.00	24.95	99.80	0.427	2.136
Cinnarizine-25 25 mg per tab	25.00	24.63	98.50	25.00	25.10	100.40	1.005	2.871
Cerebal 25 mg per tab	25.00	24.93	99.70	25.00	25.20	100.80	0.518	2.074
Stugeron 25 mg per tab	25.00	24.95	99.80	25.00	25.40	101.60	0.424	1.614

* : Average of six determinations.

* * : Theoretical values for t-values and F-test values for five degree of freedom and 95% confidence limits are 2.57 and 5.05 respectively.

Table (31): Determination of hydroxyzine HCl, in its pharmaceutical dosage forms applying the standard addition technique using RB

Dosage forms	Taken ($\mu\text{g ml}^{-1}$)	Added ($\mu\text{g ml}^{-1}$)	Found* ($\mu\text{g ml}^{-1}$)	Recovery (%)
Atarax (10 mg per tab)	3.00	0.00	3.01	100.44
		4.00	7.04	100.56
		6.00	8.96	99.57
		8.00	10.93	99.44
Bronchaline (10 mg per tab)	3.00	0.00	3.01	100.38
		4.00	7.04	100.70
		6.00	8.94	99.29
		8.00	10.95	99.50

* : Average of six determinations.

Table (32): Determination of meclozine HCl, in its pharmaceutical dosage forms applying the standard addition technique using RB

Dosage forms	Taken ($\mu\text{g ml}^{-1}$)	Added ($\mu\text{g ml}^{-1}$)	Found* ($\mu\text{g ml}^{-1}$)	Recovery (%)
Navoproxin (25 mg per tab)	3.00	0.00	2.96	98.67
		4.00	6.96	99.50
		6.00	8.91	99.00
		8.00	10.83	98.50
Vomidoxine (25 mg per tab)	3.00	0.00	3.04	101.33
		4.00	6.95	99.29
		6.00	9.04	100.44
		8.00	11.05	100.45
Ezadoxine (25 mg per tab)	3.00	0.00	3.01	100.33
		4.00	7.05	100.71
		6.00	8.96	99.56
		8.00	10.95	99.55

* : Average of six determinations.

Table (33): Determination of cinnarizine, in its pharmaceutical dosage forms applying the standard addition technique using RB

Dosage forms	Taken ($\mu\text{g ml}^{-1}$)	Added ($\mu\text{g ml}^{-1}$)	Found* ($\mu\text{g ml}^{-1}$)	Recovery (%)
Cinnarizine-25 (25 mg per tab)	3.00	0.00	3.04	101.20
		4.00	7.00	100.07
		6.00	9.03	100.30
		8.00	10.98	99.85
Cerebal (25 mg per tab)	3.00	0.00	3.03	100.96
		4.00	6.96	99.50
		6.00	8.99	99.87
		8.00	11.14	101.30
Stugeron (25 mg per tab)	3.00	0.00	2.97	98.87
		4.00	6.96	99.40
		6.00	8.95	99.45
		8.00	10.97	99.68

* : Average of six determinations.