

Table S1: Results obtained from determination of indacaterol acetate, and mometasone furaoate in artificial admixtures using the developed spectrophotometric methods.

Mixture No.	Mixture ratio (INDA: MOM)	Claimed (taken $\mu\text{g mL}^{-1}$)		1-DWM Recovery % ^a		2- RSM Recovery % ^a		3- FADM Recovery % ^a		4-AASM Recovery % ^a		5- DRM Recovery % ^a		6-DAFM Recovery % ^a	
		INDA	MOM	INDA	MOM	INDA	MOM	INDA	MOM	INDA	MOM	INDA	MOM	INDA	MOM
1 ^b	7.50: 4.00	15.00	8.00	99.43	103.01	100.75	100.00	99.06	102.86	99.46	102.38	100.25	100.15	99.22	102.57
2 ^c	7.50: 8.00	15.00	16.00	99.28	100.64	98.34	98.83	97.50	101.17	99.30	98.26	99.86	99.95	98.98	101.55
3	1.00: 1.00	10.00	10.00	101.22	102.19	99.86	100.21	100.58	102.29	101.17	100.90	102.22	103.10	100.35	103.91
4	1.00: 2.00	7.00	14.00	98.85	100.50	99.59	98.07	97.78	100.89	98.69	100.26	97.18	100.04	100.35	99.15
5	3.00: 1.00	12.00	4.00	98.56	99.06	99.31	98.96	99.31	100.00	98.54	98.17	99.82	100.13	98.59	99.38
6	4.00: 3.00	8.00	6.00	97.15	98.13	97.07	97.57	99.77	97.92	96.74	101.49	98.39	100.70	97.86	101.18
Mean $\pm$ % RSD				99.08 $\pm$ 1.34	100.59 $\pm$ 1.82	99.15 $\pm$ 1.30	98.94 $\pm$ 1.05	99.00 $\pm$ 1.19	100.86 $\pm$ 1.75	98.98 $\pm$ 1.46	100.24 $\pm$ 1.72	99.62 $\pm$ 1.72	100.68 $\pm$ 1.21	99.23 $\pm$ 0.99	101.29 $\pm$ 1.81

^a Average of three determinations.

^{b&c} Ratio of the two drugs in their pharmaceutical formulations.

Table S2: Statistical comparison between the results of the developed spectrophotometric methods and that of the reported method for the determination of indacaterol acetate, and mometasone furoate in their pure form.

	1-DWM		2- RSM		3- FADM		4-AASM		5- DRM		6-DAFM		Reported method ^a	
Component	INDA	MOM	INDA	MOM	INDA	MOM	INDA	MOM	INDA	MOM	INDA	MOM	INDA	MOM
Mean	99.99	100.16	100.01	100.18	100.01	100.18	100.19	100.44	100.49	100.39	100.04	100.01	99.88	100.17
SD	1.35	1.17	1.54	1.21	1.54	1.21	1.50	1.44	1.78	1.79	1.40	1.39	1.45	1.53
Variance	1.82	1.37	2.37	1.46	2.37	1.46	2.25	2.07	3.17	3.20	1.96	1.93	2.10	2.34
n	7	7	7	7	7	7	7	7	7	7	7	7	7	7
t-Test (2.365) ^b	0.876	0.989	0.866	0.991	0.866	0.991	0.683	0.716	0.463	0.796	0.823	0.834	-	-
F-Test (3.787) ^b	2.044	1.708	1.129	1.603	1.129	1.603	1.071	1.130	1.510	1.368	1.071	1.212	-	-

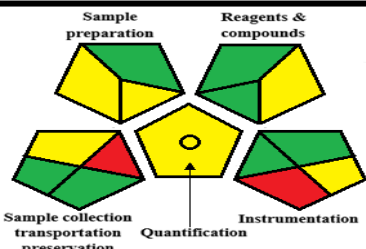
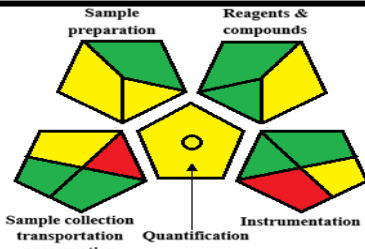
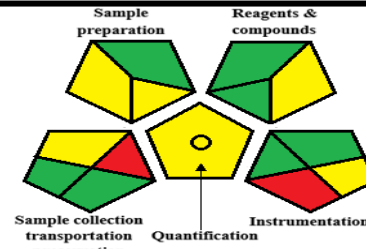
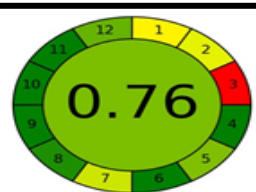
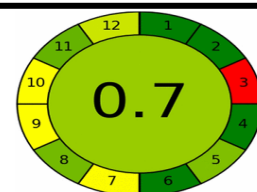
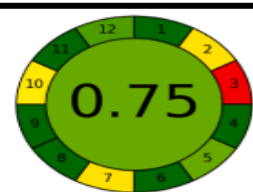
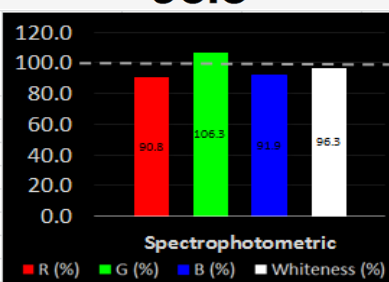
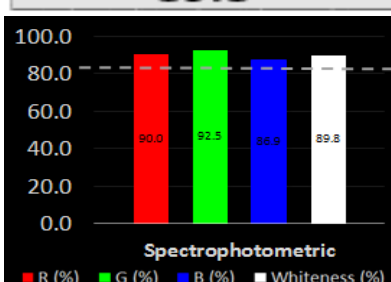
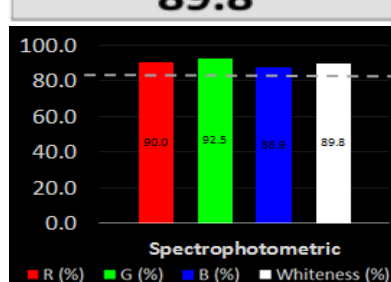
^a RP-HPLC method to estimate glycopyrronium bromide, indacaterol acetate, and mometasone furoate using Inertsil ODS C₁₈ column as stationary phase and a mixture of methanol: 0.10% glacial acetic acid (pH4), as mobile phase. Also adjusting the flow rate to be 1.00 mL min⁻¹ and a detection wavelength was 233.00 nm [7].

^b The values between parentheses represent the corresponding tabulated values of t and F at probability (0.05).

Table S3: Comparison between the developed method and published ones [3, 4], considering the analytical performance (figures of merit).

Analytical Parameters	The developed novel spectrophotometric work		Spectrophotometric paper [3]		Chemometric paper [4]	
	INDA	MOM	INDA	MOM	INDA	MOM
Calibration range ($\mu\text{g mL}^{-1}$)	1.00 -30.00	1.00 -40.00	1.00 -30.00	1.10 -32.00	6.00- 18.00	4.00-20.00
Correlation coefficient	0.9999	0.9999	0.9998	0.9997	0.9991	0.9995
LOD ($\mu\text{g mL}^{-1}$)	0.186	0.172	0.271	0.246	1.090	1.340
LOQ ($\mu\text{g mL}^{-1}$)	0.565	0.520	0.820	0.746	3.310	4.057
Sensitivity	Lowest LOD & LOQ ensured <u>highest</u> sensitivity of the new developed spectrophotometric work.		Moderate LOD & LOQ ensured <u>moderate</u> sensitivity of this reported spectrophotometric work.		Very high LOD & LOQ ensured <u>lowest</u> sensitivity of this reported chemometric work.	
Specificity	It assessed by analysis of <u>both</u> laboratory artificial admixtures (table 4) and Aectura Breezhaler pharmaceutical merchant's dosage form with two different concentrations (tables 2&3)		It assessed by analysis of <u>only</u> laboratory prepared mixtures (table S2) but there isn't any results for analysis of any pharmaceutical dosage form .		It assessed by analysis of Aectura Breezhaler pharmaceutical merchant's dosage form (tables S6)	
Accuracy	Standard addition technique was applied at three different levels (100% $\pm$ 20%) and that assessed the accuracy of developed spectrophotometric work and also ensured that matrix effects were considered and ensured that there isn't any interference came from excipients or additives in Aectura Breezhaler capsules.		Neither applied standard addition technique, so the matrix effects were not considered nor there isn't any results demonstrated showed the analysis of any dosage forms .		Standard addition technique was not applied , so the matrix effects were not considered and excipients or additives in Aectura Breezhaler capsules may cause interference during analysis of drugs.	
Accuracy	100.12	100.23	99.90	100.15	99.95	100.25

Table S4: Comparison between the developed method and published ones [3, 4], considering the ecological performance.

Ecological Parameters	The developed novel spectrophotometric work	Spectrophotometric paper [3]	Chemometric paper [4]																																																																																																												
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