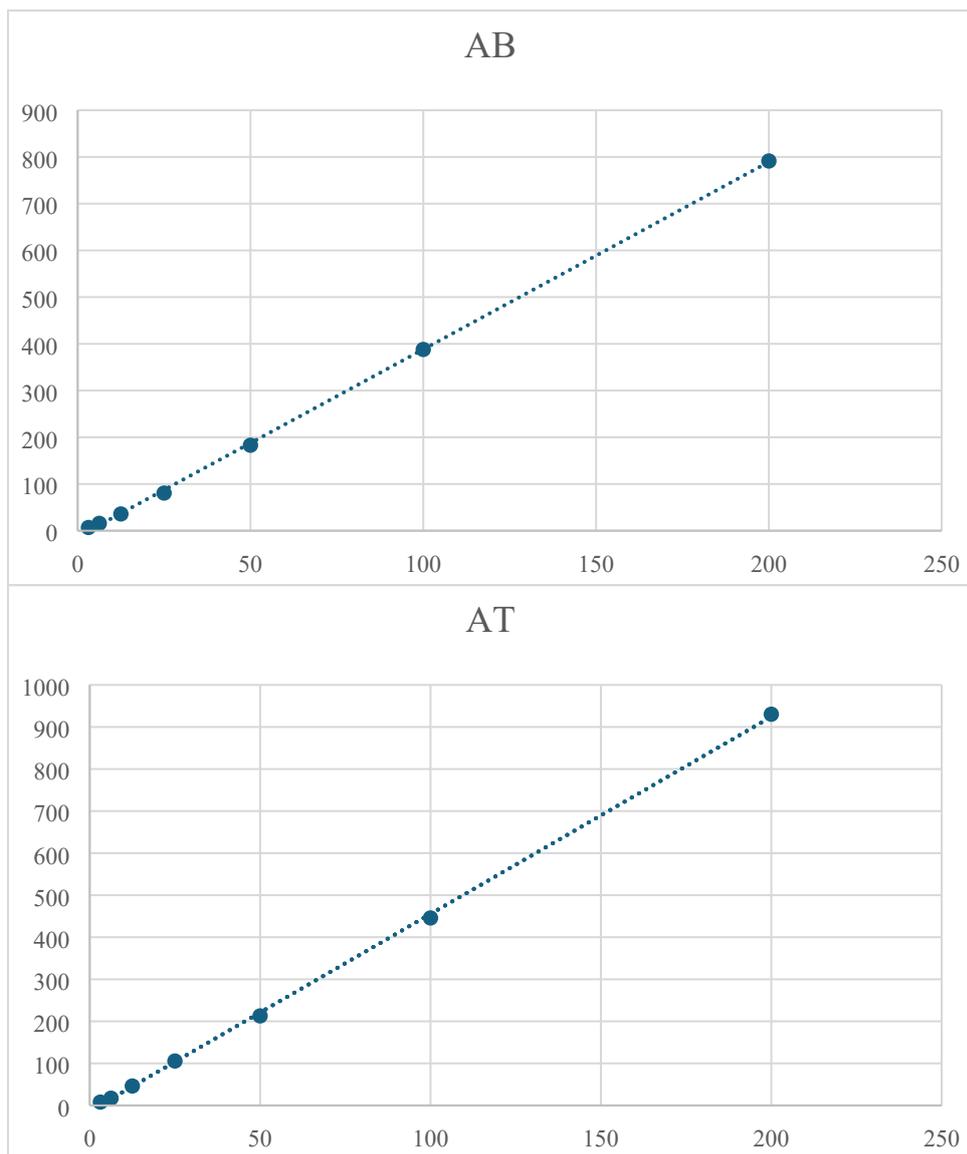


Supplementary

S1: Table showing CC with their SD within concentration range between 3.125 to 200 $\mu\text{g/mL}$ for ATN and AMB

Concentration ($\mu\text{g/mL}$)	AMB	ATN
3.125	6.93 \pm 0.24	7.92 \pm 0.45
6.25	15.77 \pm 2.59	17.16 \pm 0.35
12.5	35.9 \pm 3.66	46.21 \pm 4
25	80.62 \pm 11.75	105.64 \pm 2.39
50	183.00 \pm 8.33	212.31 \pm 8.39
100	387.97 \pm 13.88	445.84 \pm 22.1
200	791.34 \pm 12.19	930.36 \pm 22.28



S2: Graphical representation of the linear regression curve for ATN and AMB.

S3. Table showing area with SD for pH stability studies of native ATN and AMB, with BMs of the same.

Time (Hours)	ATN	AMB	Binary mixture	
			ATN	AMB
0	100.93±1.59	101.39±4.98	101.28±3.19	100.98±3.32
1	96.81±2.32	85.74±2.65	95.05±3.63	93.26±1.26

2	85.48±3.51	76.13±4.85	82.48±0.61	80.22±4.8
4	80.39±3.45	66.78±3.34	73.30±1.37	68.81±0.73

S4: Peaks interpretation of ATR-FTIR Spectra of native drugs, excipients and their BMs.

	AMB	ATN	SmartEx	Ludipres s	BMs			
					AMB + SmartEx	ATN + SmartEx	AMB + Ludipress	ATN + Ludipress
O-H/N-H stretching	3257 cm ⁻¹ (N-H broad peak)	3348 cm ⁻¹ 3160 cm ⁻¹ (broad peaks)	3279 cm ⁻¹ O-H stretching (very broad and intense peak)	3241 cm ⁻¹ O-H stretching (very broad and intense peak)	3267 cm ⁻¹ O-H stretching (very broad and intense peak)	3354 cm ⁻¹ 3261 cm ⁻¹ (broad peaks)	3330 cm ⁻¹ (Decreasin g and broadenin g of the band)	3338 cm ⁻¹ 3172 cm ⁻¹ (Broadenin g of peak)
C=O stretching	1671 cm ⁻¹	1633 cm ⁻¹	-	-	-	1633 cm ⁻¹	1696 cm ⁻¹ 1649 cm ⁻¹	1633 cm ⁻¹ 1512 cm ⁻¹
O-H/N-H bending	-	1513 cm ⁻¹ (N-H bending)	1419 cm ⁻¹ 1514 cm ⁻¹ (OH bending)	1514 cm ⁻¹ (OH bending)	-	1513 cm ⁻¹ 1419 cm ⁻¹	-	-
C-O stretching	-	-	1076 cm ⁻¹ 1014 cm ⁻¹	1068 cm ⁻¹ 1028 cm ⁻¹	-	1077 cm ⁻¹ 1015 cm ⁻¹	-	-