

Table S1

Details of the analysis of PAR and PAP in 7 synthetic sample using SANAS and SARAF.

			SANAS						SARAF	
	Actual		predicted		PAR		PAP		predicted	
	PAR($\mu\text{g/ml}$)	PAP($\mu\text{g/ml}$)	PAR($\mu\text{g/ml}$)	PAP($\mu\text{g/ml}$)	SANAS eq	R ²	SANAS eq	R ²	PAR($\mu\text{g/ml}$)	PAP($\mu\text{g/ml}$)
Sample1-1 *	1.0	0.50	1.01	0.51	$y = 0.1429x + 0.1443$	0.9988	$y = 0.1291x + 0.0662$	0.997	1.0	0.51
Sample1-2	1.0	0.50	0.97	0.53	$y = 0.141x + 0.1362$	0.9994	$y = 0.1274x + 0.0679$	0.9986	0.95	0.52
Sample1-3	1.0	0.50	0.97	0.53	$y = 0.1409x + 0.1372$	0.9995	$y = 0.1268x + 0.0672$	0.9994	0.97	0.53
Sample1(mean) **	1.0	0.50	0.98(± 0.02)	0.53(± 0.01)					0.97(± 0.03)	0.52(± 0.01)
Sample2-1	2.0	0.50	1.937	0.537	$y = 0.1416x + 0.2743$	0.9982	$y = 0.1252x + 0.0672$	0.9979	1.92	0.53
Sample2-2	2.0	0.50	1.987	0.518	$y = 0.1431x + 0.2845$	0.9996	$y = 0.1296x + 0.0671$	0.9991	1.99	0.52
Sample2-3	2.0	0.50	1.978	0.524	$y = 0.1425x + 0.2819$	0.9993	$y = 0.1287x + 0.0674$	0.9992	1.98	0.53
Sample2(mean)	2.0	0.50	1.97(± 0.038)	0.53(± 0.010)					1.96(± 0.04)	0.53(± 0.01)
Sample3-1	1.0	1.0	1.1	0.9	$y = 0.1487x + 0.1628$	0.9988	$y = 0.1237x + 0.1117$	0.9939	1.07	0.9
Sample3-2	1.0	1.0	1.09	0.96	$y = 0.1425x + 0.1549$	0.9989	$y = 0.1234x + 0.1179$	0.9954	1.05	0.95
Sample3-3	1.0	1.0	1.03	0.97	$y = 0.1411x + 0.1458$	0.9989	$y = 0.1295x + 0.1259$	0.997	1.11	0.94
Sample3(mean)	1.0	1.0	1.07(± 0.03)	0.94(± 0.04)					1.04(± 0.03)	0.94(± 0.04)
Sample4-1	4.0	1.0	3.84	1.08	$y = 0.1431x + 0.55$	0.9992	$y = 0.1295x + 0.1403$	0.9983	3.84	1.09
Sample4-2	4.0	1.0	3.98	1.03	$y = 0.1455x + 0.5792$	0.9998	$y = 0.1279x + 0.1321$	0.9988	3.99	1.04
Sample4-3	4.0	1.0	3.96	1.05	$y = 0.1451x + 0.5745$	0.9985	$y = 0.1266x + 0.133$	0.9968	3.96	1.04
Sample4(mean)	4.0	1.0	3.93(± 0.07)	1.06(± 0.03)					3.93(± 0.08)	1.06(± 0.03)
Sample5-1	3.0	0.75	2.92	0.8	$y = 0.1468x + 0.4289$	0.9989	$y = 0.1224x + 0.0978$	0.994	2.91	0.77
Sample5-2	3.0	0.75	3.04	0.74	$y = 0.1426x + 0.4337$	0.9987	$y = 0.129x + 0.0957$	0.997	3.04	0.73

Sample5-3	3.0	0.75	2.98	0.78	$y = 0.1454x + 0.4334$	0.9997	$y = 0.1277x + 0.0995$	0.9987	2.98	0.78
Sample5(mean)	3.0	0.75	2.98(±0.06)	0.77(± 0.03)					2.98(± 0.06)	0.76(± 0.03)
Sample6-1	6.0	0.50	5.89	0.52	$y = 0.1478x + 0.8701$	0.9993	$y = 0.1276x + 0.0659$	0.9986	5.91	0.52
Sample6-2	6.0	0.50	5.88	0.55	$y = 0.145x + 0.8533$	0.9992	$y = 0.1241x + 0.0685$	0.9944	5.9	0.5
Sample6-3	6.0	0.50	5.87	0.55	$y = 0.1437x + 0.8445$	0.9992	$y = 0.1247x + 0.0681$	0.9962	5.89	0.53
Sample6(mean)	6.0	0.50	5.88(±0.01)	0.52(± 0.02)					5.89(± 0.01)	0.52(± 0.02)
Sample7-1	8.0	2.0	8.07	2.06	$y = 0.1407x + 1.135$	0.9975	$y = 0.1272x + 0.2623$	0.9956	8.04	2.05
Sample7-2	8.0	2.0	8.05	2.01	$y = 0.1443x + 1.162$	0.9981	$y = 0.1292x + 0.2596$	0.9967	8.06	1.99
Sample7-3	8.0	2.0	7.94	2.1	$y = 0.147x + 1.1667$	0.9995	$y = 0.1287x + 0.2705$	0.9989	7.95	2.12
Sample7(mean)	8.0	2.0	8.02(±0.07)	2.06(± 0.05)					8.02(± 0.06)	2.05(± 0.07)

* Sample i-1, Sample i-2 and Sample i-3 are three repeat of ith synthetic sample

** Mean value of each synthetic sample (± standard deviation) (n=3)

Table S2

Details of the analysis of PAR and PAP in pharmaceutical real sample using SANAS and SARAF.

				SANAS								SARAF			
		Added		PAR				PAP				PAR		PAP	
		PAP (µg/ml)	PAR (µg/ml)	Peredicted (µg/ml)	SANAS plot eq	R ²	Recover y	Peredicted (µg/ml)	SANAS plot eq	R ²	Recover y	Peredicted (µg/ml)	Recov ery	Peredict ed (µg/ml)	Recover y
jalinous tablet 325 mg	comp1-1 *	0	0	3.235	$y = 0.1395x + 0.4514$	0.9990	-----	0.042	$y = 0.111x + 0.0046$	0.9919	-----	3.220	-----	0.000	-----
	comp1-2	0	0	3.193	$y = 0.1409x + 0.4499$	0.9988	-----	0.031	$y = 0.1288x + 0.004$	0.9973	-----	3.200	-----	0.000	-----
	comp1-3	0	0	3.213	$y = 0.1461x + 0.4695$	0.9985	-----	0.010	$y = 0.1276x + 0.0013$	0.9957	-----	3.220	-----	0.000	-----
	comp1(mean) **	0	0	3.214 (±0.021)			-----	0.028 (±0.016)			-----	3.213 (±0.012)	-----	0.000 (±0.000)	-----
	comp2-1	0	0.5	3.153	$y = 0.1405x + 0.4431$	0.9988	-----	0.532	$y = 0.122x + 0.065$	0.996	100.86	3.150	-----	0.510	102.00
	comp2-2	0	0.5	3.148	$y = 0.1435x + 0.4516$	0.9984	-----	0.531	$y = 0.1205x + 0.064$	0.9977	100.56	3.140	-----	0.510	102.00
	comp2-3	0	0.5	3.190	$y = 0.1432x + 0.4568$	0.9980	-----	0.523	$y = 0.1197x + 0.0626$	0.9976	99.04	3.180	-----	0.500	100.00
	comp2(mean)	0	0.5	3.164 (±0.023)			-----	0.529 (±0.005)			100.15 (±0.98)	3.157 (±0.021)	-----	0.507 (±0.006)	101.33 (±1.15)
	comp3-1	1.000	0.500	4.284	$y = 0.1438x + 0.6162$	0.9980	106.97	0.492	$y = 0.1203x + 0.0591$	0.9965	92.75	4.250	103.7	0.460	92.00
	comp3-2	1.000	0.500	4.237	$y = 0.1435x + 0.4516$	0.9984	102.29	0.517	$y = 0.1246x + 0.0644$	0.9956	97.84	4.200	98.7	0.480	96.00
	comp3-3	1.000	0.500	4.225	$y = 0.1432x + 0.4568$	0.9984	101.06	0.558	$y = 0.1247x + 0.0696$	0.9962	106.01	4.190	97.7	0.540	108.00
	comp3(mean)	1.000	0.500	4.248 (±0.031)			103.44 (±3.19)	0.522 (±0.033)			98.87 (±6.69)	4.213 (±0.032)	100.03 (±3.21)	0.493 (±0.042)	98.67 (±8.33)
ou ta bl	comp1-1	0.000	0.000	3.236	$y = 0.1436x + 0.4646$	0.9977	-----	0.061	$y = 0.1254x + 0.0077$	0.9967	-----	3.270	-----	0.000	-----

Chemidarou tablet 500 mg	comp1-2	0.000	0.000	3.246	$y = 0.1443x + 0.4686$	0.998	-----	0.076	$y = 0.1235x + 0.0094$	0.997	-----	3.300	-----	0.000	-----
	comp1-3	0.000	0.000	3.277	$y = 0.1434x + 0.4699$	0.998	-----	0.085	$y = 0.1286x + 0.011$	0.9957	-----	3.290	-----	0.010	-----
	comp1(mean)	0.000	0.000	3.253 (± 0.021)			-----	0.074 (± 0.012)			-----	3.287 (± 0.015)	-----	0.003 (± 0.006)	-----
	comp2-1	0.000	0.500	3.267	$y = 0.145x + 0.4737$	0.9981	-----	0.507	$y = 0.13x + 0.0659$	0.9970	93.17	3.250	-----	0.490	97.34
	comp2-2	0.000	0.500	3.231	$y = 0.1468x + 0.4743$	0.9986	-----	0.496	$y = 0.1301x + 0.0645$	0.9969	90.98	3.240	-----	0.480	95.34
	comp2-3	0.000	0.500	3.265	$y = 0.1398x + 0.4566$	0.9949	-----	0.517	$y = 0.1226x + 0.0634$	0.9972	95.19	3.330	-----	0.470	93.34
	comp2(mean)	0.000	0.500	3.254 (± 0.021)			-----	0.507 (± 0.011)			93.11 (± 2.02)	3.273 (± 0.049)	-----	0.480 (± 0.010)	95.34 (± 1.67)
	comp3-1	2.000	1.000	5.284	$y = 0.1437x + 0.759$	0.9987	101.53	0.989	$y = 0.1304x + 0.129$	0.9968	94.79	5.280	99.65	0.960	95.67
	comp3-2	2.000	1.000	5.211	$y = 0.1442x + 0.7516$	0.9985	97.91	0.997	$y = 0.1262x + 0.1258$	0.995	95.59	5.220	96.65	0.970	96.67
	comp3-3	2.000	1.000	5.223	$y = 0.1407x + 0.7349$	0.9988	98.51	1.034	$y = 0.1213x + 0.1254$	0.9949	99.33	5.230	97.15	1.020	101.67
	comp3(mean)	2.000	1.000	5.239 (± 0.039)			99.32 (± 1.37)	1.007 (± 0.024)			96.57 (± 1.73)	5.243 (± 0.032)	97.82(± 1.14)	0.983 (± 0.032)	98.00 (± 2.278)
	comp1-1	0.000	0.000	4.863	$y = 0.1401x + 0.6814$	0.9988	-----	0.038	$y = 0.1175x + 0.0045$	0.9981	-----	4.890	-----	0.000	-----
	comp1-2	0.000	0.000	4.876	$y = 0.1391x + 0.6784$	0.9988	-----	0.026	$y = 0.1213x + 0.0031$	0.9977	-----	4.900	-----	0.000	-----
	comp1-3	0.000	0.000	4.834	$y = 0.1381x + 0.6675$	0.9989	-----	0.060	$y = 0.1241x + 0.0075$	0.9982	-----	4.870	-----	0.020	-----
	comp1(mean)	0.000	0.000	4.858 (± 0.021)			-----	0.041 (± 0.018)			-----	4.887 (± 0.015)	-----	0.007 (± 0.012)	-----
	comp2-1	0.000	0.500	4.858	$y = 0.1409x + 0.6847$	0.9984	-----	0.539	$y = 0.125x + 0.0673$	0.9976	99.52	4.820	-----	0.490	96.66
	comp2-2	0.000	0.500	4.883	$y = 0.139x + 0.679$	0.9978	-----	0.570	$y = 0.1265x + 0.0721$	0.9981	105.85	4.860	-----	0.570	112.66
	comp2-3	0.000	0.500	4.808	$y = 0.1438x + 0.6912$	0.9976	-----	0.540	$y = 0.1287x + 0.0695$	0.9978	99.876	4.810	-----	0.530	104.66

	comp2(mean)	0.000	0.500	4.850 (±0.038)			-----	0.550 (±0.018)			101.75(± 2.90)	4.830 (±0.026)	-----	0.530 (±0.040)	104.66 (±5.73)
	comp3-1	1.000	1.000	5.785	$y = 0.1419x + 0.8208$	0.9983	92.73	1.056	$y = 0.125x + 0.132$	0.9941	101.48	5.760	87.3	1.050	104.33
	comp3-2	1.000	1.000	5.929	$y = 0.1401x + 0.8309$	0.9986	107.14	1.131	$y = 0.1246x + 0.141$	0.9956	109.03	5.890	100.3	1.090	108.33
	comp3-3	1.000	1.000	5.877	$y = 0.1412x + 0.8296$	0.9988	101.89	1.086	$y = 0.1231x + 0.1336$	0.9957	104.46	5.840	95.3	1.040	103.33
	comp3(mean)	1.000	1.000	5.864 (±0.073)			100.59 (±7.29)	1.091 (±0.038)			104.99 (±3.80)	5.830 (±0.066)	94.3(± 6.56)	1.060 (±0.026)	105.33 (±2.66)
behse syrups 120mg/5ml	comp1-1	0.000	0.000	6.293	$y = 0.1452x + 0.9138$	0.9988	-----	0.059	$y = 0.1249x + 0.0073$	0.9954	-----	6.330	-----	0.000	-----
	comp1-2	0.000	0.000	6.269	$y = 0.147x + 0.9218$	0.9991	-----	0.069	$y = 0.1258x + 0.0087$	0.9962	-----	6.250	-----	0.000	-----
	comp1-3	0.000	0.000	6.249	$y = 0.1463x + 0.9142$	0.9988	-----	0.103	$y = 0.1277x + 0.0132$	0.9961	-----	6.260	-----	0.000	-----
	comp1(mean)	0.000	0.000	6.271 (±0.022)			-----	0.077 (±0.023)			-----	6.280 (±0.044)	-----	0.000 (±0.000)	-----
	comp2-1	0.000	0.500	6.189	$y = 0.149x + 0.9224$	0.9988	-----	0.575	$y = 0.1317x + 0.0757$	0.9967	99.536	6.180	-----	0.510	102.00
	comp2-2	0.000	0.500	6.288	$y = 0.1438x + 0.904$	0.9994	-----	0.532	$y = 0.1206x + 0.0642$	0.9984	91.027	6.300	-----	0.520	104.00
	comp2-3	0.000	0.500	6.274	$y = 0.1441x + 0.9044$	0.9995	-----	0.594	$y = 0.1195x + 0.071$	0.9988	103.36	6.280	-----	0.600	120.00
	comp2(mean)	0.000	0.500	6.250 (±0.054)			-----	0.567 (±0.032)			97.97 (±4.49)	6.253 (±0.064)	-----	0.543 (±0.049)	108.67 (±9.27)
	comp3-1	3.000	1.000	9.255	$y = 0.144x + 1.3331$	0.999	99.50	1.018	$y = 0.1278x + 0.1301$	0.9987	94.078	9.230	98.33	1.010	101.00
	comp3-2	3.000	1.000	9.260	$y = 0.1415x + 1.3106$	0.9993	99.66	1.035	$y = 0.1272x + 0.1317$	0.9986	95.808	9.300	100.67	1.050	105.00
	comp3-3	3.000	1.000	9.148	$y = 0.1412x + 1.2917$	0.9985	95.94	1.119	$y = 0.1266x + 0.1416$	0.9991	104.188	9.150	95.67	1.110	111.00
	comp3(mean)	3.000	1.000	9.221 (±0.063)			98.37 (±2.11)	1.057 (±0.054)			98.03 (±5.41)	9.227(±0.0 75)	98.22(± 2.50)	1.057 (±0.050)	105.67 (±5.03)

* comp i-1, comp i-2 and comp i-3 are three repeat of ith composition of each real sample

** Mean value of each composition (± standard deviation) (n=3)

