

Supplementary Information

Determination of 13 Azithromycin Impurities in Pharmaceutical Formulations by HPLC-UV

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Table S1. Data regarding experiment planning

Experiment	Peak	time / min		Resolution
1	impurity E	23.959	R12	4.890603489
	impurity F	29.318	R23	1.508027148
	impurity J	30.991	R34	1.920575929
	impurity I	32.399	R45	16.35673447
	azithromycin	56.703		
			average	6.168985259
			deviation	6.956963089
2	impurity E	19.241	R12	4.31183054
	impurity F	23.802	R23	1.243111405
	impurity J	25.085	R34	1.868797031
	impurity I	26.414	R45	16.41955212
	azithromycin	50.092		
			average	5.960822773
			deviation	7.097080857

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Table S1. Data regarding experiment planning (cont.)

Experiment	Peak	time / min		Resolution
3	impurity E	10.43	R12	13.17386767
	impurity F	20.512	R23	1.198535957
	impurity J	21.576	R34	2.045181446
	impurity I	22.834	R45	17.63747846
	azithromycin	45.508		
			average	8.513765883
4	impurity E	15.017	R12	12.43287691
	impurity F	27.201	R23	2.005311471
	impurity J	29.396	R34	1.629674504
	impurity I	30.613	R45	16.5701399
	azithromycin	54.897		
			average	8.159500695
5	impurity E	12.019	R12	14.67412666
	impurity F	22.908	R23	1.846847585
	impurity J	24.515	R24	1.709485609
	impurity I	25.624	R45	16.87696986
	azithromycin	48.536		
			average	8.776857429
6	impurity E	9.724	R12	13.82698513
	impurity F	19.109	R23	1.745765039
	impurity J	20.522	R34	1.682547128
	impurity I	21.515	R45	17.95596121
	azithromycin	43.596		
			average	8.802814625
			deviation	8.357083617

Table S1. Data regarding experiment planning (cont.)

Experiment	Peak	time / min		Resolution
7	impurity E	13.698	R12	13.00516484
	impurity F	24.343	R23	2.720024043
	impurity J	26.894	R34	1.123237973
	impurity I	27.715	R45	16.30434459
	azithromycin	51.487		
			average	8.288192861
			deviation	7.502212912
8	impurity E	10.932	R12	13.66431638
	impurity F	20.1	R23	2.636118212
	impurity J	22.167	R34	1.414300018
	impurity I	22.992	R45	17.73103104
	azithromycin	45.335		
			average	8.861441412
			deviation	8.081909676
9	impurity E	9.065	R12	14.32069483
	impurity F	17.452	R23	2.445245968
	impurity J	19.191	R34	1.181697253
	impurity I	19.935	R45	16.97757068
	azithromycin	41.203		
			average	8.731302183
			deviation	8.077815126

Table S1. Data regarding experiment planning (cont.)

Experiment	Peak	time / min		Resolution
10	impurity E	12.003	R12	14.16755959
	impurity F	23.173	R23	1.810428929
	impurity J	24.859	R34	1.675687898
	impurity I	26.051	R45	16.73135724
	azithromycin	49.028		
			average	8.596258414
			deviation	7.982501859
11	impurity E	11.903	R12	13.99259829
	impurity F	22.75	R23	1.780935064
	impurity J	24.408	R34	1.508788197
	impurity I	25.506	R45	16.53911683
	azithromycin	48.454		
			average	8.455359597
			deviation	7.933283064