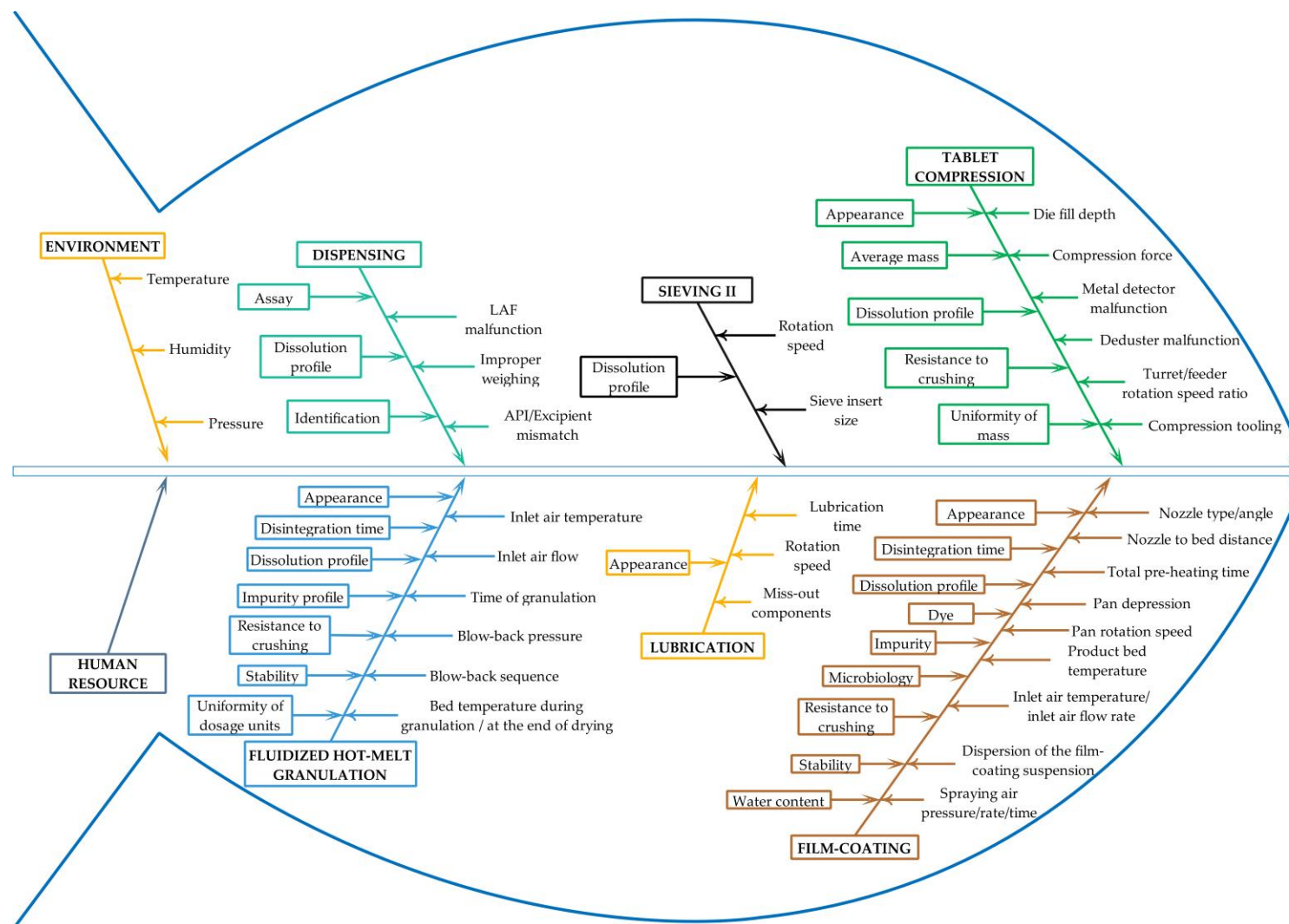


Supplementary Material S1

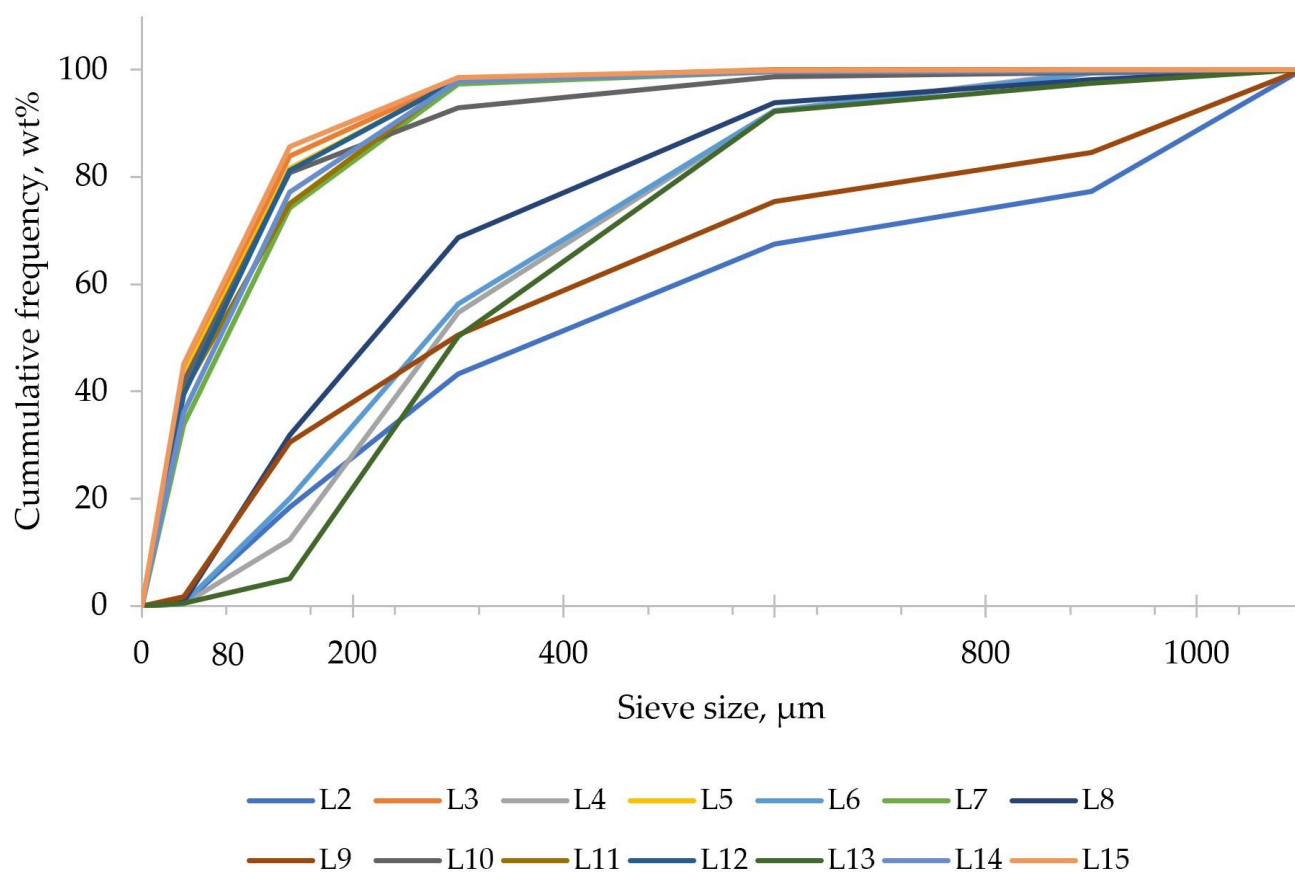
Table S1. Database used for multivariate data analysis.

Primary ID	Class ID	Granulation temperature (°C)	Granulation time (min)	Macrogol type	Kolliwax content (%)	Loss on drying (%)	Bulk density (g/100 mL)	Flow-out time (sec/100 g)	Particle size distribution, wt.% retained on sieve (µm)						Compression force, core (kN)	Resistance to crushing, core (N)	Disintegration time, core (sec)	Resistance to crushing, fct. (N)	Disintegration time, fct. (sec)
									> 1000	800	400	200	80	< 80					
L1	ED	50	5	PEG8000P	These batches were not lubricated	0.33	This set-point resulted in batch failure								Batches were not compressed to tablets				
L2	ED	65	5	PEG8000P		0.53	58.6	14	22.7	9.9	24.2	24.9	18	0.4					
L3	ED	50	30	PEG8000P		0.46	57.2	-	0.0	0	1.7	14.2	40.1	42.8					
L4	ED	65	30	PEG8000P		0.40	54.2	13	0.4	7.2	37.3	42.1	11.8	0.4					
L5	ED	50	5	PEG6000P		0.23	58.2	-	0.2	0.1	1.8	16.1	38.4	42.6					
L6	ED	65	5	PEG6000P		0.47	53.6	13	0.6	7.1	36	36.3	19.5	0.5					
L7	ED	50	30	PEG6000P		0.23	59.5	42	0.2	0.2	2.2	23	40.1	33.6					
L8	ED	65	30	PEG6000P		0.43	54.4	13	1.9	4.2	25.2	36.8	31.1	0.7					
L9	ED	50	5	PEG8000C		0.46	58.7	11	15.4	9.2	24.9	20	28.8	1.7					
L10	ED	65	5	PEG8000C		0.43	57.2	-	0.5	0.8	5.7	12.1	38.8	41.5					
L11	ED	50	30	PEG8000C		0.53	55.1	-	0.0	0.2	1.5	23.1	34.8	39.7					
L12	ED	65	30	PEG8000C		0.50	57.1	-	0.1	0.2	1.6	16.9	41.4	39.4					
L13	ED	57.5	17.5	PEG8000P		0.50	52.3	13	2.6	5.2	42.2	45.3	4.6	0.5					
L14	ED	57.5	17.5	PEG8000P		0.40	56.9	-	0.2	0.2	1.7	20.6	40.8	36					
L15	ED	57.5	17.5	PEG8000P		0.17	56.1	-	0.0	0.1	1.4	12.8	40.1	44.7					
L16	ED-L	65	10	PEG8000P	1.67	0.44	51.6	13	0.5	4.2	23.3	43.4	26.6	1.2	16.5	117	977	128	943
L17	ED-L	65	10	PEG6000P	1.67	0.44	54.2	13	0.2	5.6	33.2	36.4	22.8	0.8	16.5	113	690	126	882
L18	ED-L	65	10	PEG8000P	1.33	0.34	53.3	13	0.2	2.4	21	44.4	29.8	1.2	16.5	130	732	132	874
L19	ED-L	65	10	PEG8000P	2.00	0.34	53.3	13	0.2	2.4	21	44.4	29.8	1.2	16.5	127	1092	120	1227

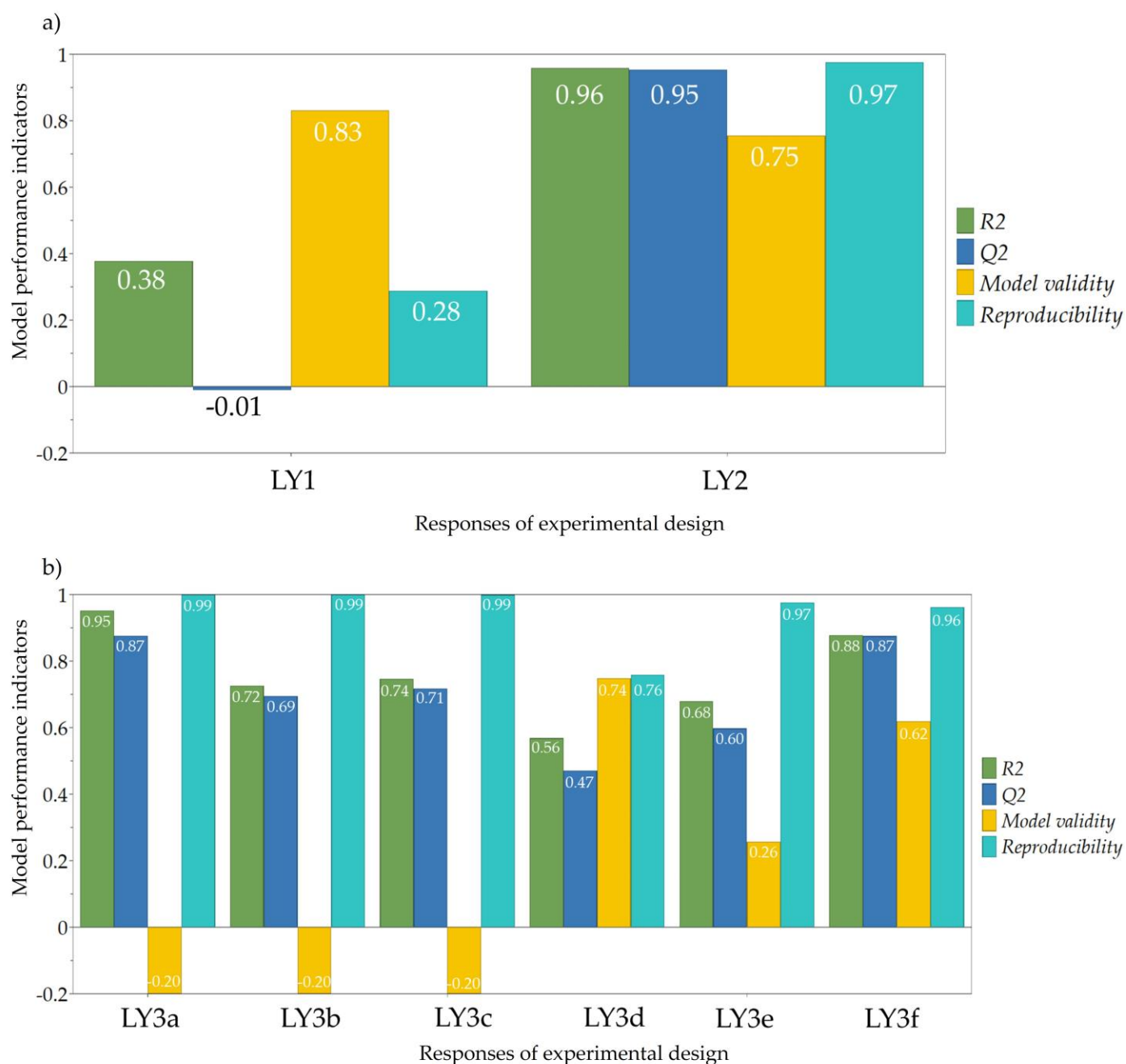
L20	ED-L	65	10	PEG6000P	1.33	0.42	54.1	13	0.2	6.4	29.6	36.4	25.8	0	16.5	120	877	116	621
L21	ED-L	65	10	PEG6000P	1.33	0.4	51.6	13	0.4	3	20.6	46.2	27.2	1.6	15.5	124	878	124	979
L22	ED-L	65	10	PEG6000P	1.33	0.36	55.3	12	0.2	5.2	26.6	40.6	25.8	1.4	15.5	117	654	126	932
L23	ED-L	65	10	PEG6000P	1.33	0.36	54	12	0.2	3.3	27.2	33.4	30.4	2	15.5	119	873	124	1011
L24	ED-L	65	10	PEG8000P	1.33	0.32	52.7	12	0.4	3.6	22.4	38.4	32.2	1.2	16	120	683	127	673
L25	ED-L	65	10	PEG6000P	1.33	0.48	56.6	12	0.6	9.8	29.8	29.6	29.2	1.8	16	113	751	121	776
P1.1	P	65	10	PEG6000P	1.33	0.36	58	12	2.2	7.7	25.4	22.2	38.7	2.7	10	109	630	This batch was not film-coated	
P1.2	P	65	10	PEG6000P	1.33	0.36	58	12	2.2	7.7	25.4	22.2	38.7	2.7	12	116	630		
P1.3	P	65	10	PEG6000P	1.33	0.36	58	12	2.2	7.7	25.4	22.2	38.7	2.7	14	125	630		
P1.4	P	65	10	PEG6000P	1.33	0.36	58	12	2.2	7.7	25.4	22.2	38.7	2.7	16	124	720		
P1.5	P	65	10	PEG6000P	1.33	0.36	58	12	2.2	7.7	25.4	22.2	38.7	2.7	18	129	720		
P1.6	P	65	10	PEG6000P	1.33	0.36	58	12	2.2	7.7	25.4	22.2	38.7	2.7	20	127	750		
P2.1	P	65	10	PEG6000P	1.33	0.44	66	13	0.0	3.7	24.6	19	47.7	4.3	15	136	Inappropriate tablet compression		
P2.2	P	65	10	PEG6000P	1.33	0.44	66	13	0.0	3.7	24.6	19	47.7	4.3	16	139			
P2.3	P-DIS	65	10	PEG6000P	1.33	0.44	66	13	0.0	3.7	24.6	19	47.7	4.3	18	138	720	148	900
P2.4	P-DIS	65	10	PEG6000P	1.33	0.44	66	13	0.0	3.7	24.6	19	47.7	4.3	20	147	810	146	900
P3.1	P	60	10	PEG8000P	1.33	0.52	59.6	20	0.0	0	7.3	26.8	43.2	20.8	16	116	690		
P3.2	P-DIS	60	10	PEG8000P	1.33	0.52	59.6	20	0.0	0	7.3	26.8	43.2	20.8	18	124	720	130	810
P3.3	P-DIS	60	10	PEG8000P	1.33	0.52	59.6	20	0.0	0	7.3	26.8	43.2	20.8	20	125	720	137	810
P3.4	P	60	10	PEG8000P	1.33	0.52	59.6	20	0.0	0	7.3	26.8	43.2	20.8	22	118	720	These samples were not film- coated	
P3.5	P	60	10	PEG8000P	1.33	0.52	59.6	20	0.0	0	7.3	26.8	43.2	20.8	24	123	720		
P4.1	P-DIS	60	10	PEG6000P	1.33	0.58	63.6	19	0.0	0	14.6	16.2	52.7	15.7	18	123	780	138	1020
P4.2	P-DIS	60	10	PEG6000P	1.33	0.58	63.6	19	0.0	0	14.6	16.2	52.7	15.7	20	125	780	135	1020
P5	P-DIS	60	10	PEG8000P	1.33	0.63	60	13	0.0	0	21.5	23.6	43.2	10.8	20	134	720	139	900
P6	P-DIS	60	10	PEG8000P	1.33	0.58	60	12	0.0	3.7	25.2	24.1	41.7	4.8	20	139	720	139	900
P7	P-DIS	60	10	PEG8000P	1.33	0.64	60	12	0.0	3.7	23.7	22.8	42.4	6.8	20	137	720	147	900



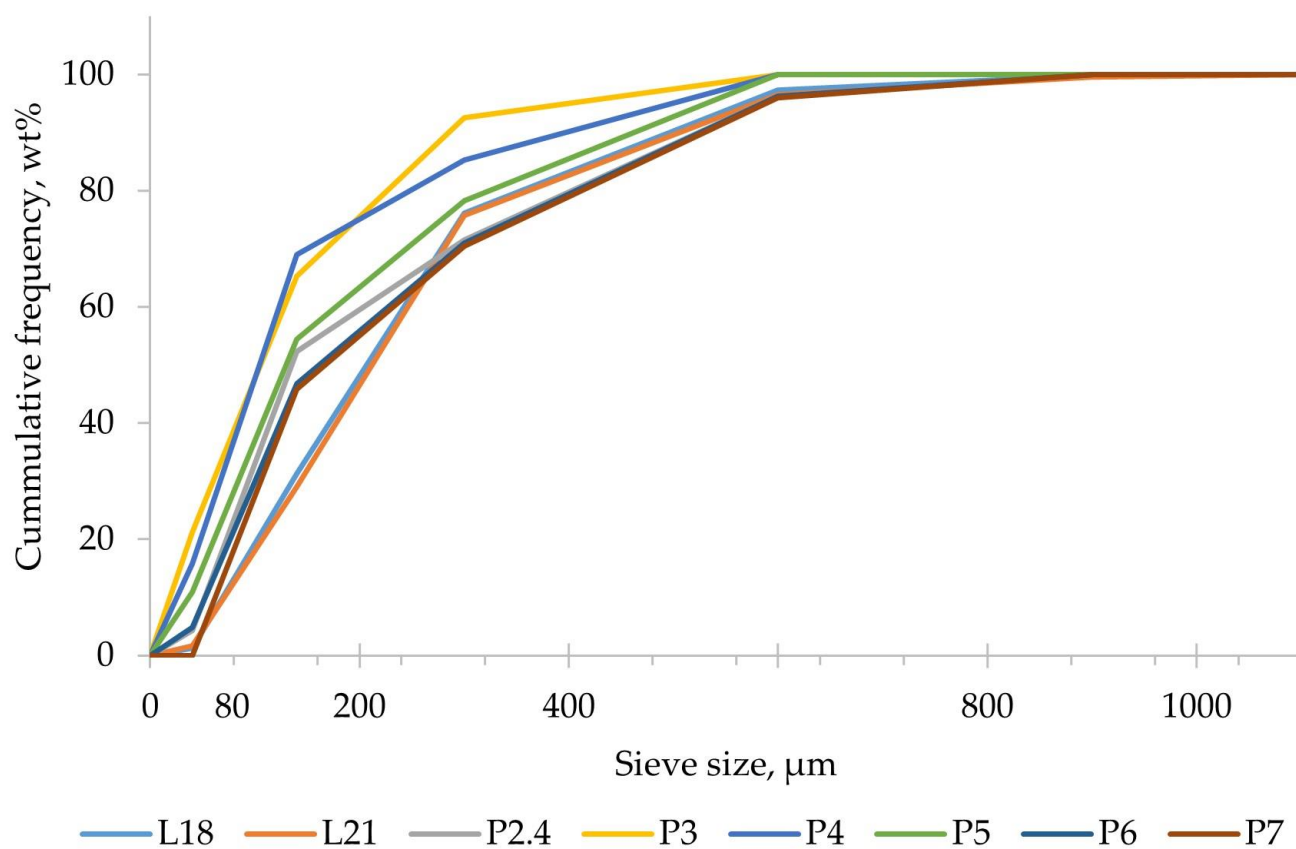
Supplementary Figure S1. Ishikawa Chart presenting the most important factors taken into consideration that might influence product performance.



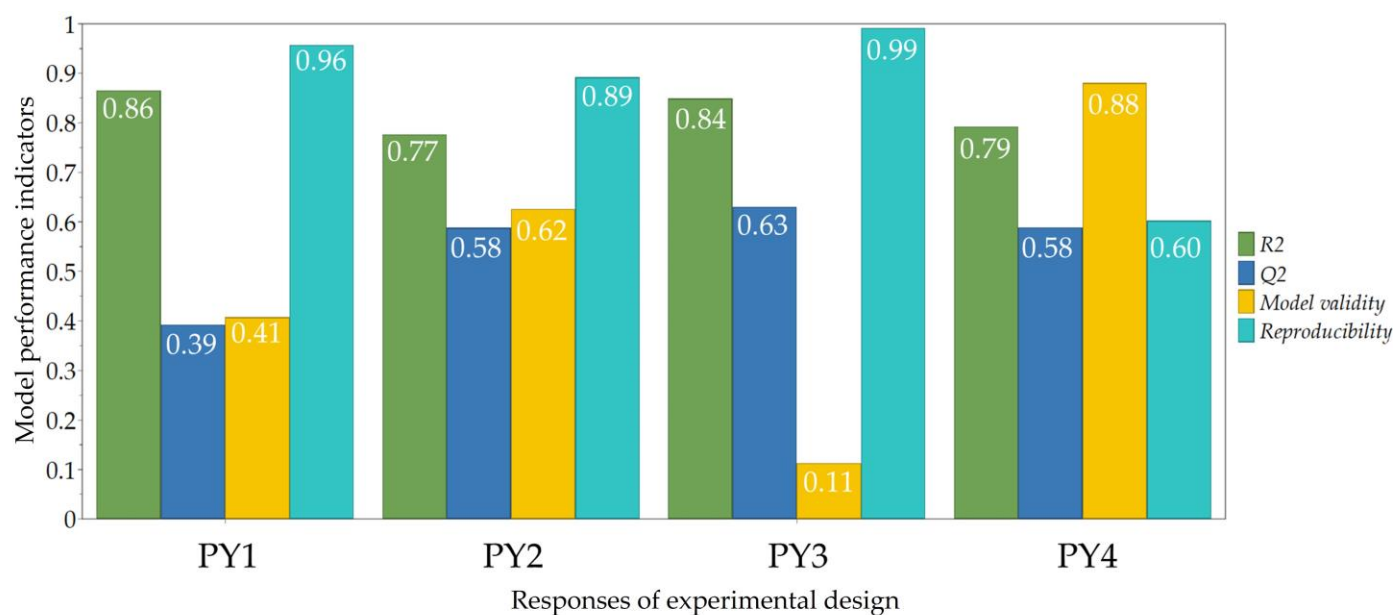
Supplementary Figure S2. Granulometric distribution of laboratory scale batches



Supplementary Figure S3. Illustration of the product performance indicators for a) bulk density (LY1), flow-out time (LY2) and b) particle size distribution (LY3a-LY3b)



Supplementary Figure S4. Granulometric distribution of laboratory vs. pilot scale batches



Supplementary Figure S5. Illustration of model performance indicators in case of experimental design for tablet compression. PY1 – Disintegration time, PY2 – Cpk, PY3 – Resistance to crushing, PY4 - Friability