

Supplementary Materials: A QbD Approach for Evaluating the Effect of Selective Laser Sintering Parameters on Printability and Properties of Solid Oral Forms

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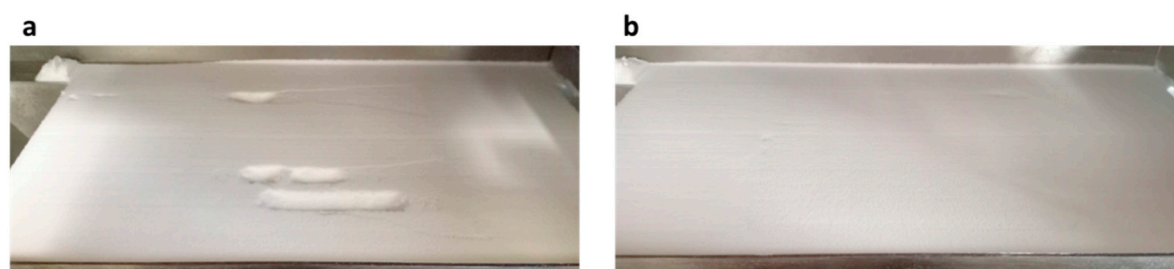


Figure S1. Aspect of the powder bed after SLS printing: (a) presence of curling, (b) absence of curling.

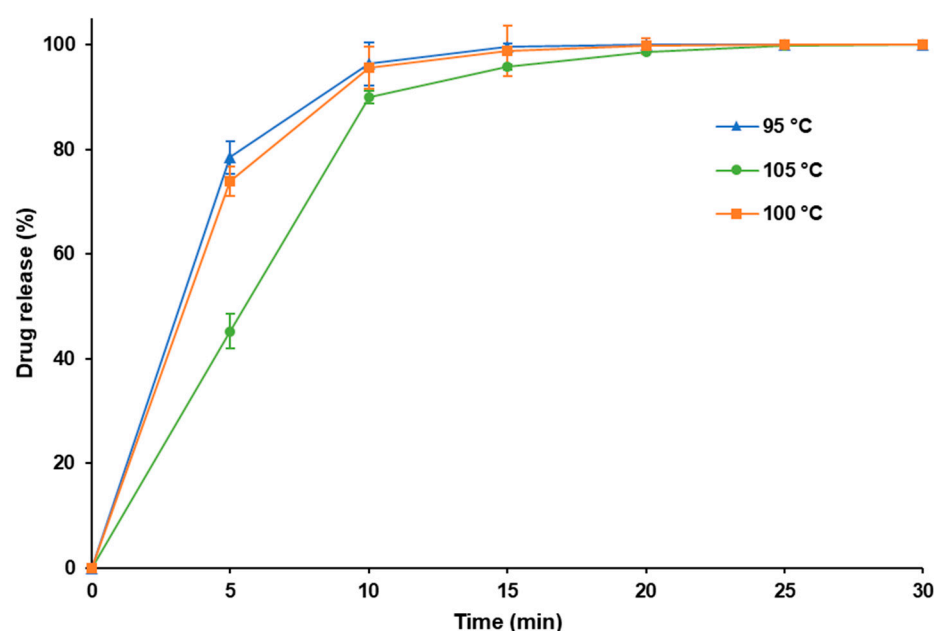


Figure S2. Dissolution profiles of SOFs printed at different temperatures (95, 100, 105 °C).

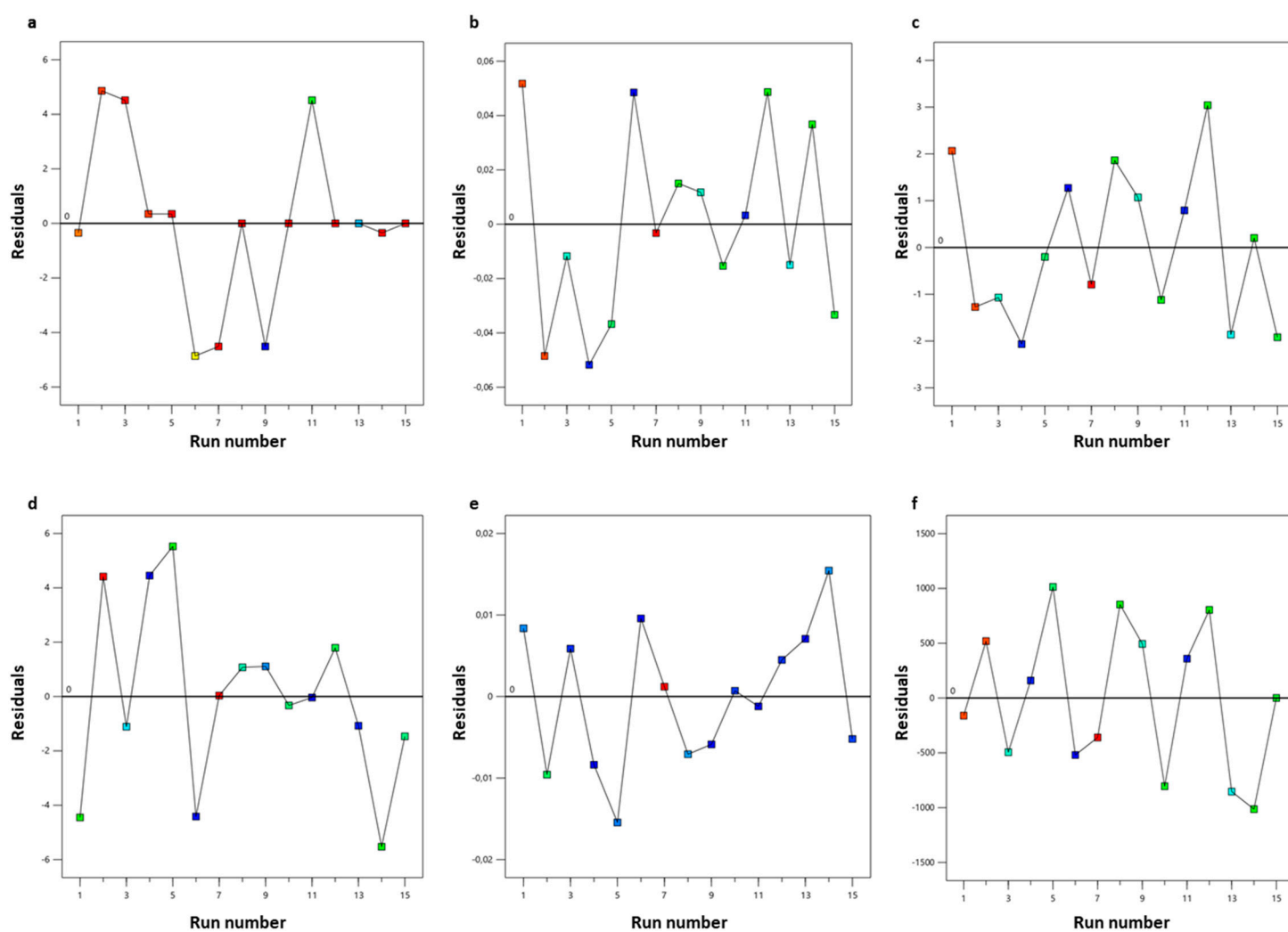


Figure S3. Residuals vs. run plots: (a) yield, (b) height, (c) weight, (d) hardness, (e) disintegration time (response transform), (f) percentage of drug release at 10 min (response transform).

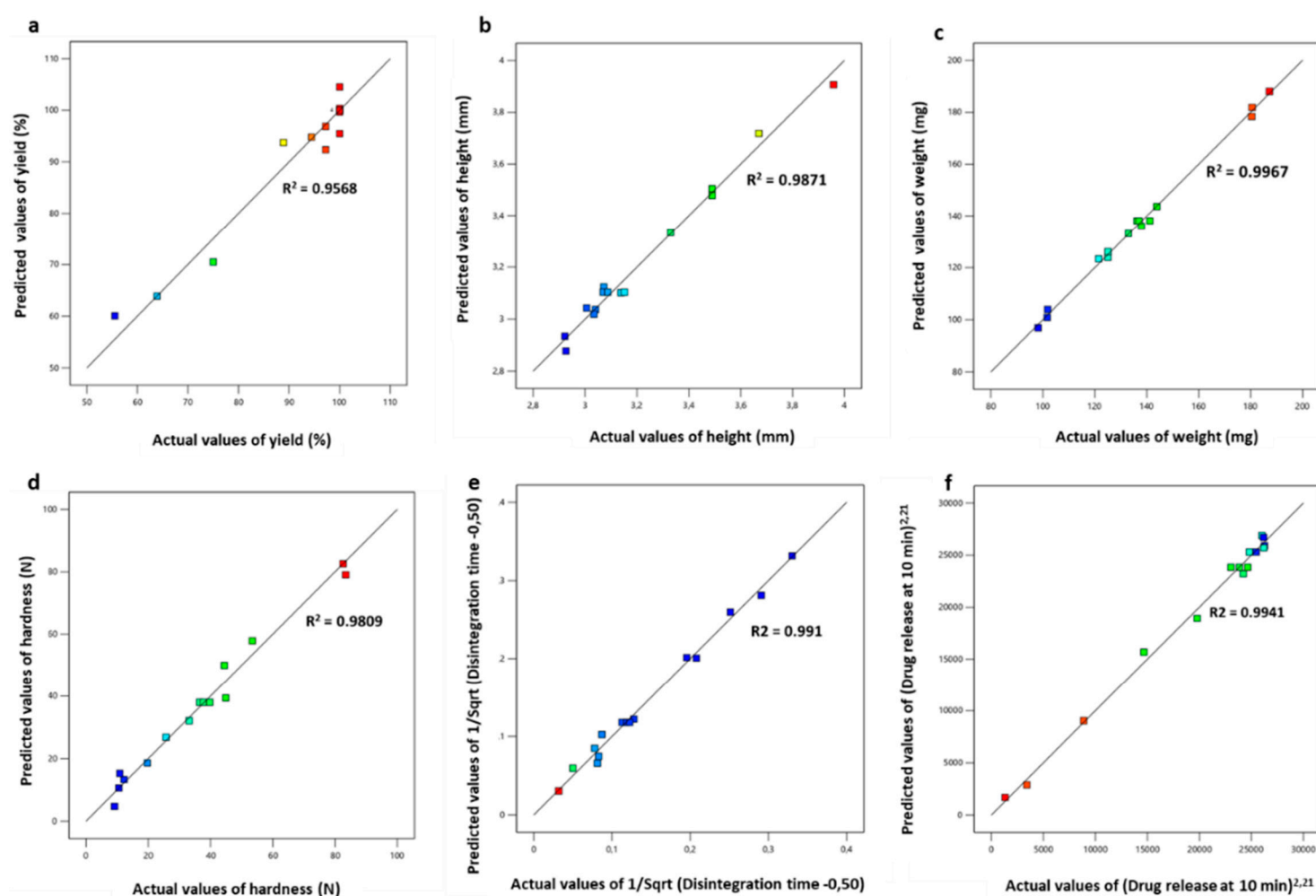


Figure S4. Plots of predicted *vs.* actual responses: (a) yield, (b) height, (c) weight, (d) hardness, (e) disintegration time (response transform), (f) percentage of drug release at 10 min (response transform).

Table S1. Average thickness of the sintered layer for each printing run.

Run	Height of SOF (mm)	LT (μm)	ASLT (μm)
1	3.96	80	131.9
2	3.67	80	122.3
3	2.92	120	146.1
4	3.07	120	153.6
5	3.01	100	125.3
6	2.93	120	146.3
7	3.33	100	138.8
8	3.03	120	151.7
9	3.49	80	116.3
10	3.09	100	128.7
11	3.04	100	126.7
12	3.15	100	131.3
13	3.49	80	116.3
14	3.14	100	130.8
15	3.07	100	127.9

Table S2. Kinetic parameters (**a** and **b**) of Weibull model fitted to the dissolution profiles of SOFs printed at each run and the corresponding root mean square error (RMSE).

Run	a	b	RMSE
1	6.1080	1.1321	0.6832
2	1.0068	1.1126	1.7795
3	2.8423	1.1556	0.0405
4	2.6304	1.1557	0.0546
5	2.8369	1.1557	0.0103
6	2.2815	1.1585	0.0045
7	1.9790	1.0805	1.4024
8	3.5157	1.1509	0.2963
9	2.2422	1.1586	0.0083
10	3.1812	1.1517	0.0252
11	2.2709	1.1587	0.0002
12	2.8103	1.2477	0.0948
13	2.5282	1.1565	0.0062
14	4.6830	1.1421	0.9509
15	3.1848	1.1515	0.1636

Table S3. Drug content of the SOFs printed at each run.

Run	Weight-normalized Drug Content (%)
1	102.6 \pm 5.4
2	100.8 \pm 1.4
3	99.9 \pm 1.3
4	99.8 \pm 2.3
5	102.6 \pm 2.8
6	98.5 \pm 1.0
7	101.7 \pm 1.8
8	100.6 \pm 2.1
9	99.9 \pm 7.6
10	99.7 \pm 1.8
11	99.5 \pm 4.3
12	100.5 \pm 4.3
13	99.7 \pm 0.3
14	101.6 \pm 2.2
15	99.9 \pm 1.8