

Dynamic Alginate Hydrogel as an Antioxidative Bioink for Bioprinting

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Table S1: Primer sequence for the RT-PCR study.

| Gene | Genbank ID | Forward sequence | Reverse sequence | Product size |
|--------|-------------|----------------------------|-------------------------|--------------|
| Acan | NM_007424.3 | TCACTGTTACCGCCACTTTCC | TGCTGCTCAGATGTGACTGC | 86 |
| Col2a1 | NM_031163.3 | CGAGTGGAAGAGCGGAGACTAC | CCAGTTTTTCCGAGGGACAGT | 136 |
| Mmp13 | NM_008607.2 | GGTTATGACATTCTGGAAGGTTATCC | CGTGGTTCTCAGAGAAGAAGAGG | 130 |
| Actb | NM_007393.5 | AAATCGTGCGTGACATCAAAGA | GCCATCTCCTGCTCGAAGTC | 64 |

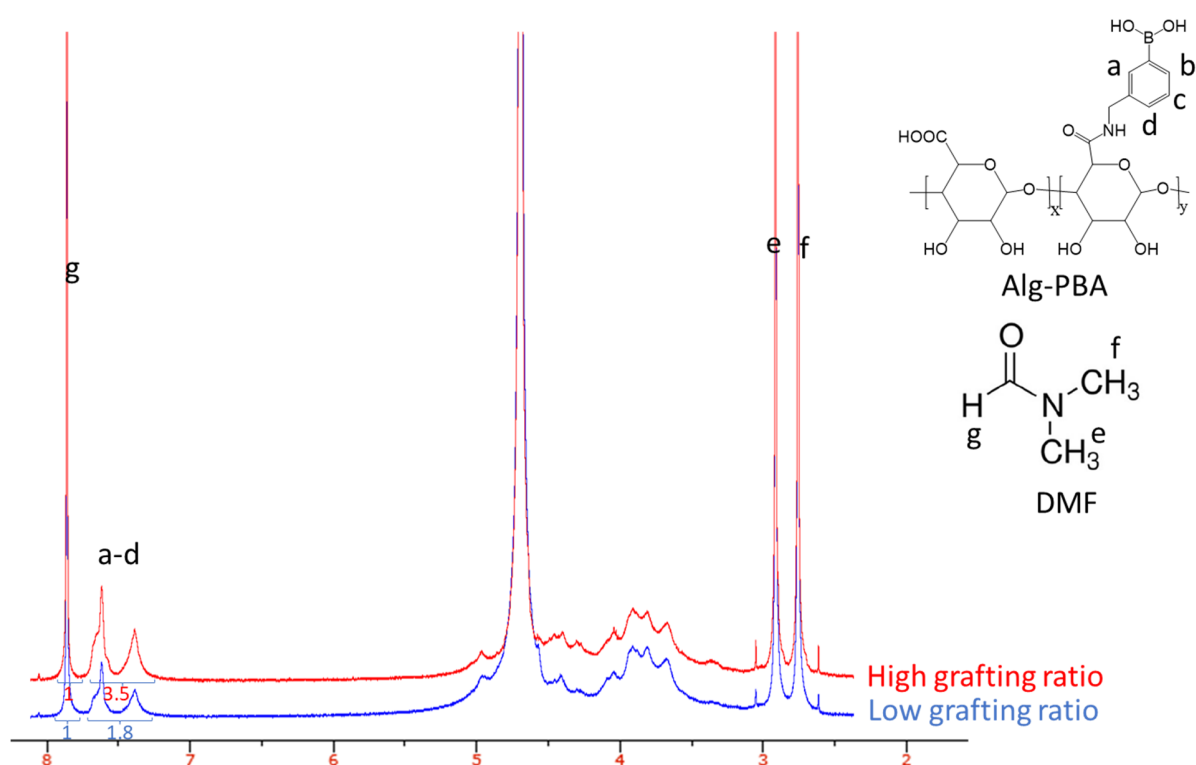


Figure S1: The grafting ratio of PBA in alginate can be determined by ^1H NMR in D_2O with the addition of 25 mM DMF.

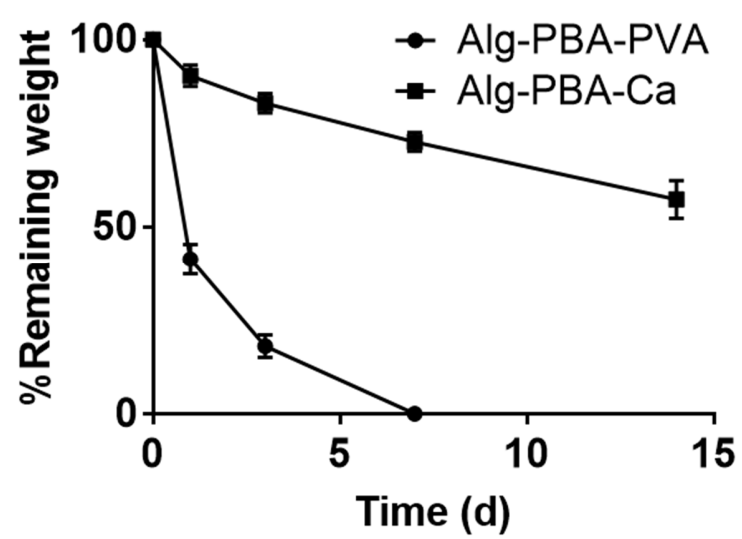


Figure S2. Stability of Alg-PBA hydrogel before and after calcium crosslinking in the cell culture medium.

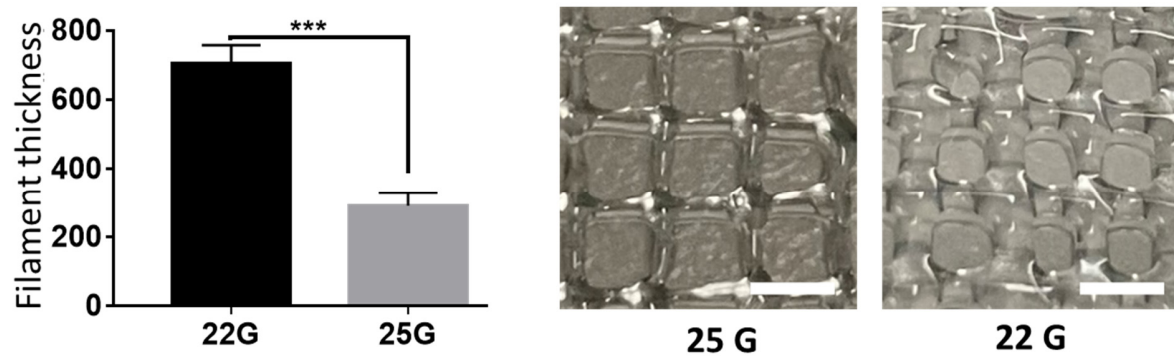


Figure S3. Influence of printing nozzle diameter on the filament thickness of the printed grid scaffold. Scale bar 2.5 mm. *** $p < 0.001$.