

## Supplementary Information:

# Tuning the Degradation Rate of Alginate-Based Bioinks for Bioprinting Functional Cartilage Tissue

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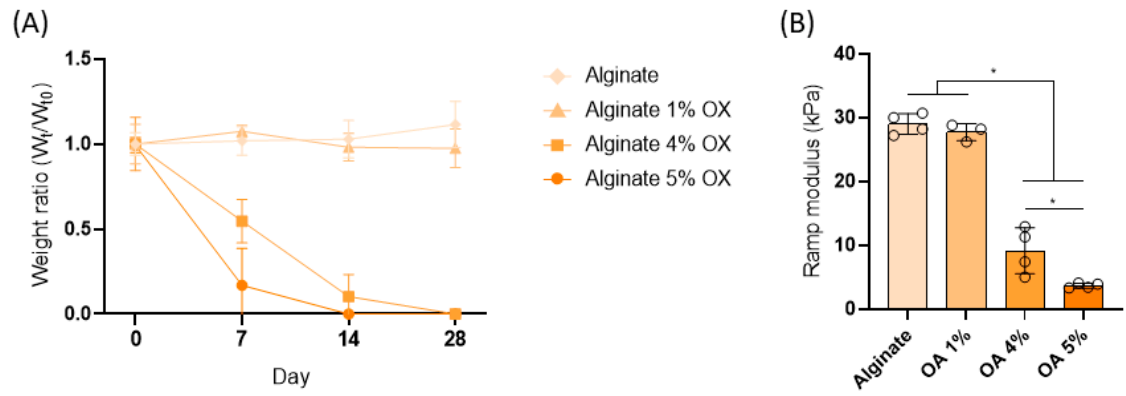
**Supplementary Figure S1.** (A) Dry weight of partially oxidized alginate hydrogels at different time points. (B) Ramp modulus of partially oxidized alginate hydrogels.

**Supplementary Figure S2.** Quantification of sGAG and collagen deposition in alginate and oxidized alginate gels following 28 days of in vitro culture.

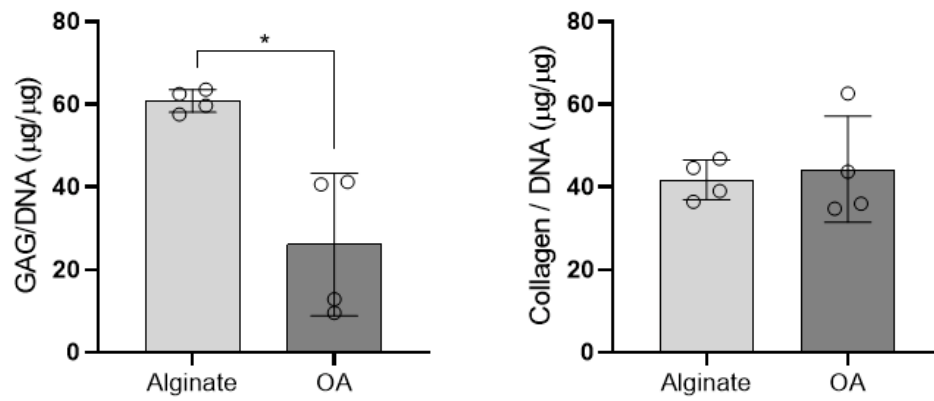
**Supplementary Figure S3.** Post printing spreading ratio (width of the filament divided by needle diameter).

**Supplementary Figure S4.** SEM images at Day 0 and Day 2 revealing the increased porosity after the gelatin removal. The scale bars are equal to 20  $\mu\text{m}$ .

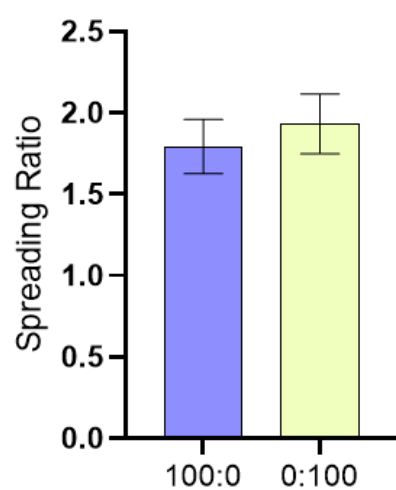
**Supplementary Figure S5.** Representative images of the live/dead staining at day 7. Green and red indicate live and dead cells, respectively. Scale bars are equal to 250  $\mu\text{m}$ .



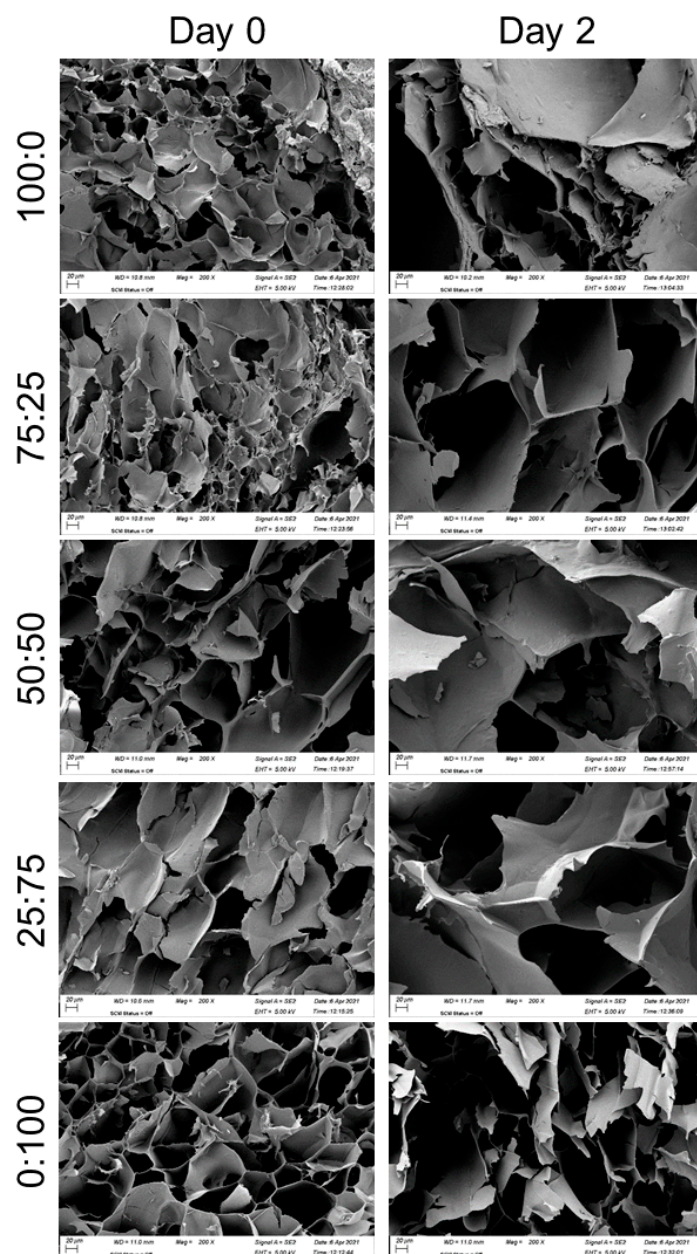
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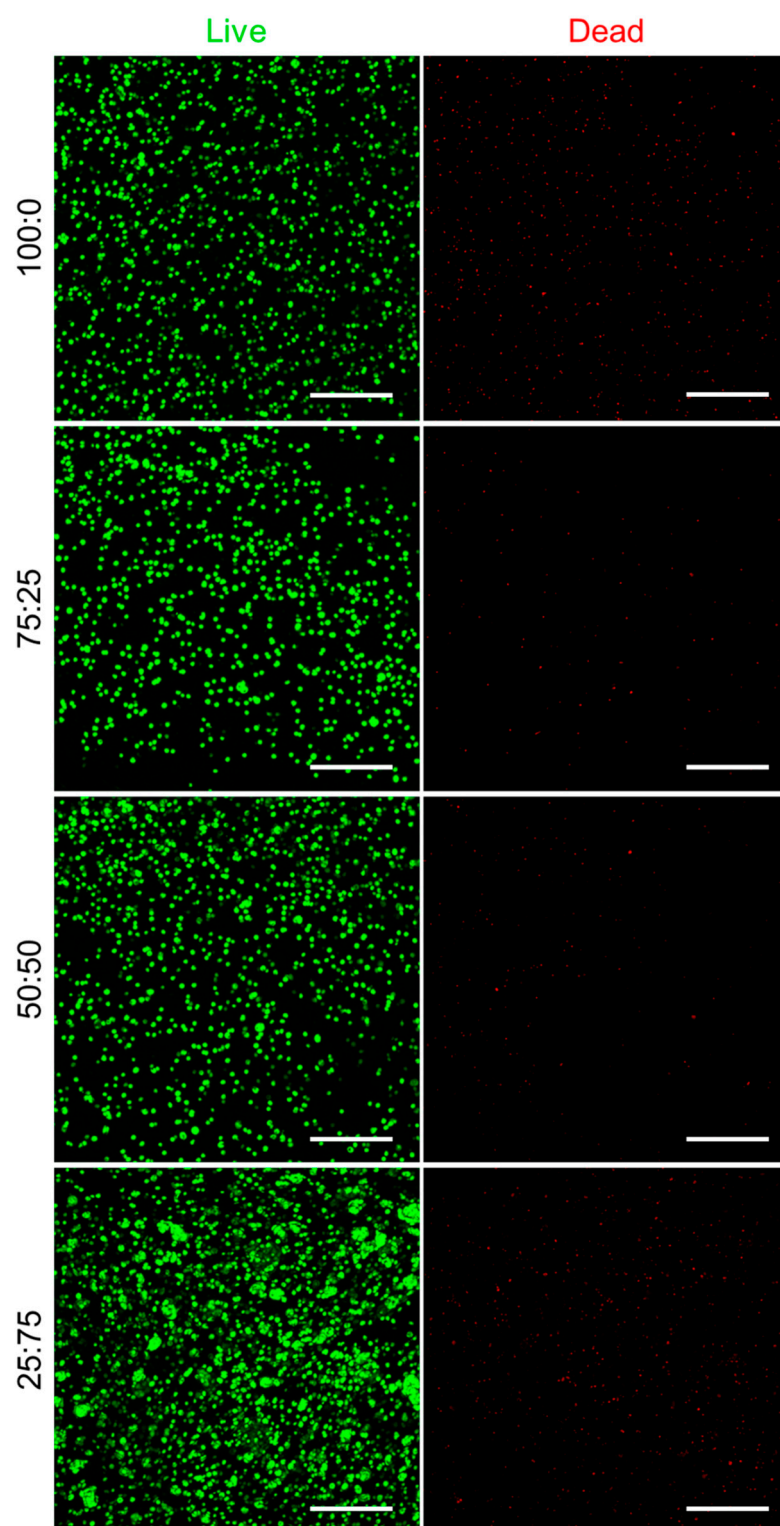
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