ADVANCED HEALTHCARE MATERIALS

Supporting Information

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Bioinks for Space Missions: The Influence of Long-Term Storage of Alginate-Methylcellulose-Based Bioinks on Printability as well as Cell Viability and Function

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Supplementary Data

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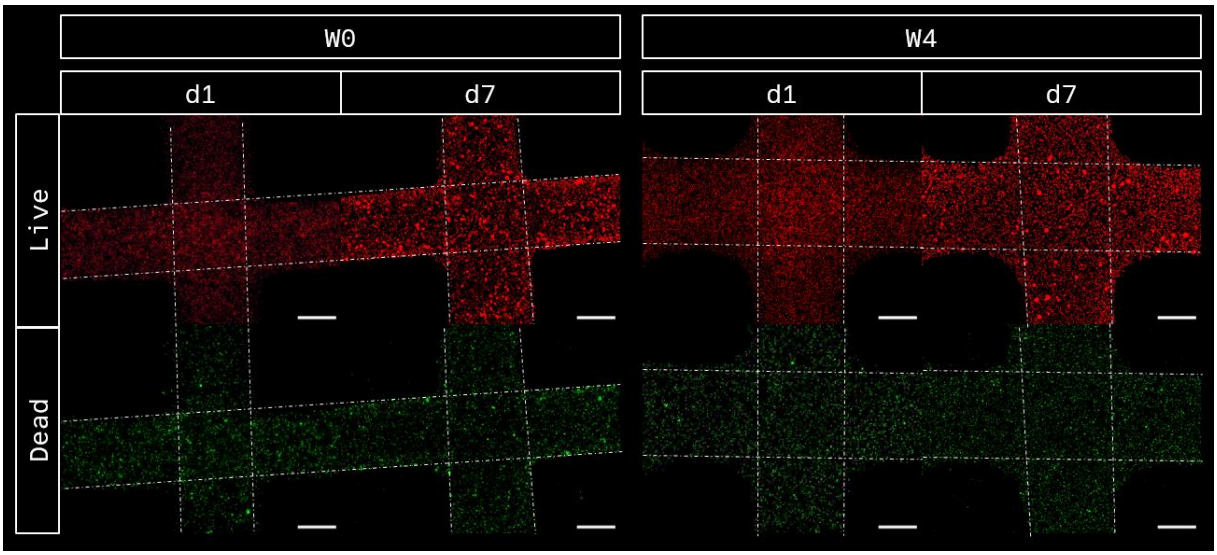

Figure S1: Representative fluorescence microscopic images of live (red, chlorophyll autofluorescence) and dead (green, stained with SYTOX™ Green nucleic acid stain) cells of Chlorella vulgaris embedded in printed and crosslinked scaffolds after 1 and 7 days of cultivation. C. vulgaris-laden Alg-MC bioinks were used for bioprinting immediately after preparation (W0) and at different time points of bioink storage at 4°C (W1-W4); the bioinks were brought to room temperature before bioprinting. The dashed lines outline the strand structure of the scaffolds. Scale bars = 200 µm.

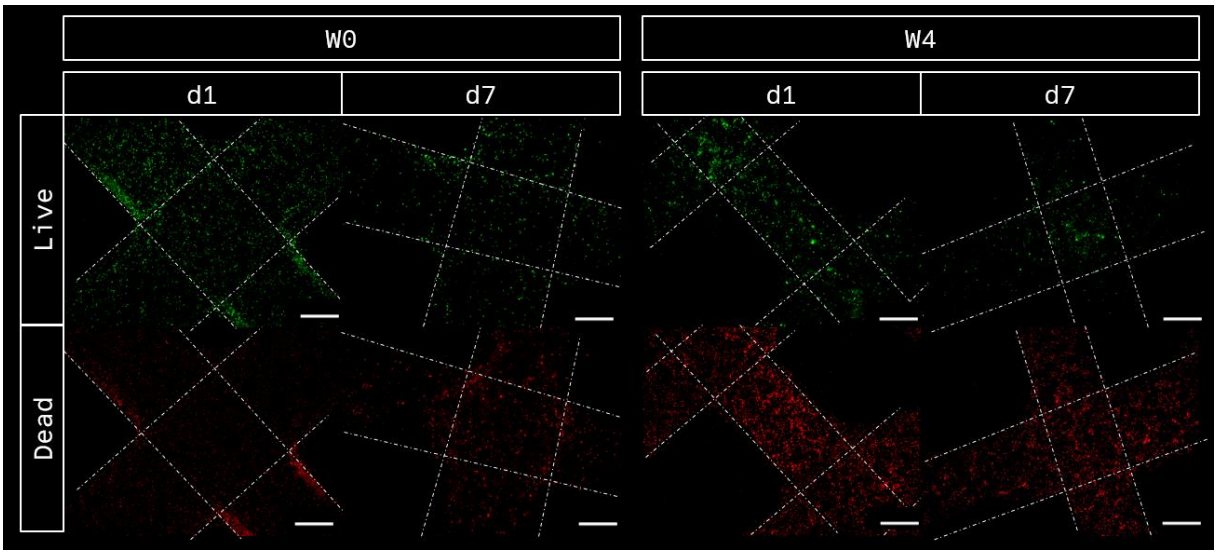

Figure S2: Representative fluorescence microscopic images of live (green, stained with CalceinAM) and dead (red, stained with ethidium homodimer1) cells of hTERT-MSC-laden PBS-Alg-MC scaffolds after 1 and 7 days of cultivation. hTERT-MSC-laden PBS-Alg-MC bioinks were used for bioprinting immediately after preparation (W0) and at different time points of bioink storage at 4°C (W1-W4); the bioinks were brought to room temperature before bioprinting. The dashed lines outline the strand structure of the scaffolds. Scale bars = 200 µm.

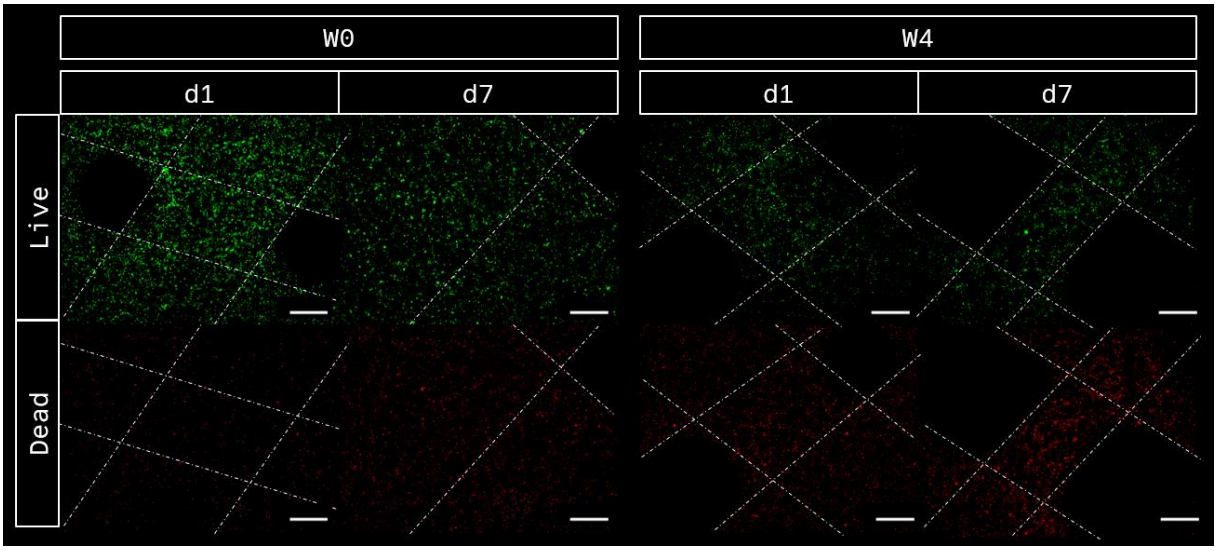

Figure S2: Representative fluorescence microscopic images of live (green, stained with CalceinAM) and dead (red, stained with ethidium homodimer1) cells of hTERT-MSC-laden Plasma-Alg-MC scaffolds after 1 and 7 days of cultivation. hTERT-MSC-laden Plasma-Alg-MC bioinks were used for bioprinting immediately after preparation (W0) and at different time points of bioink storage at 4°C (W1-W4); the bioinks were brought to room temperature before bioprinting. The dashed lines outline the strand structure of the scaffolds. Scale bars = 200 µm.

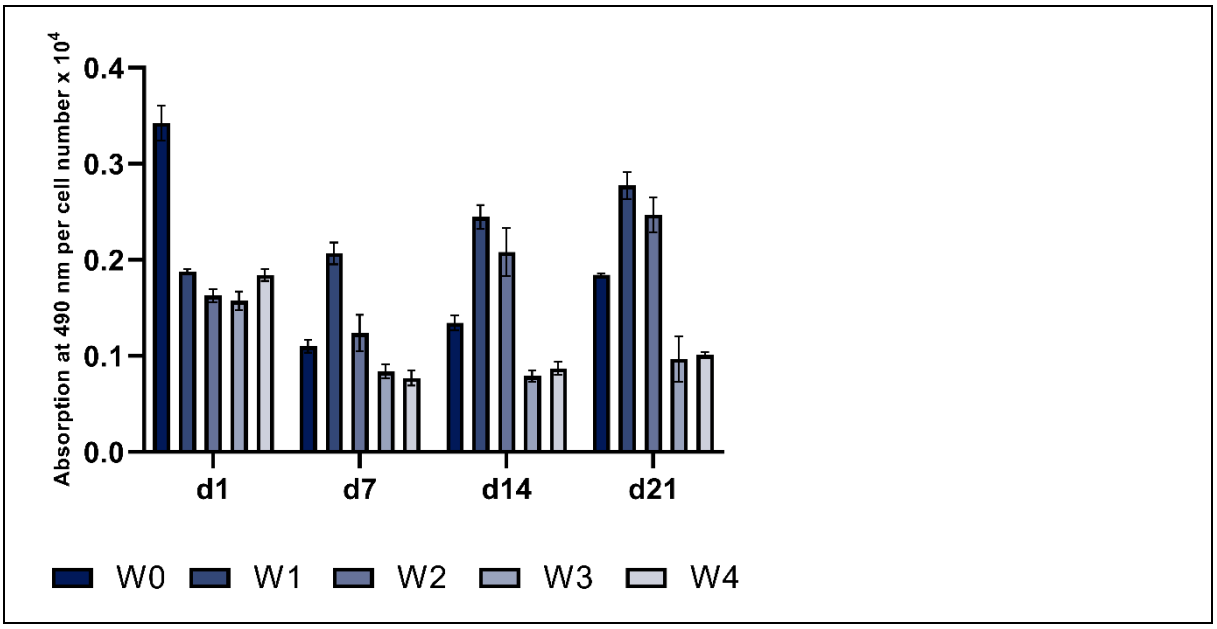

Figure S3: Relative DNA content specific LDH activity of SaOS embedded in printed and crosslinked scaffolds after 1, 7, 14 and 21 days of cultivation. SaOS-laden Plasma-Alg-MC bioinks were used for bioprinting immediately after preparation (W0) and at different time points of bioink storage at 4°C (W1-W4); the bioinks were brought to room temperature before bioprinting.

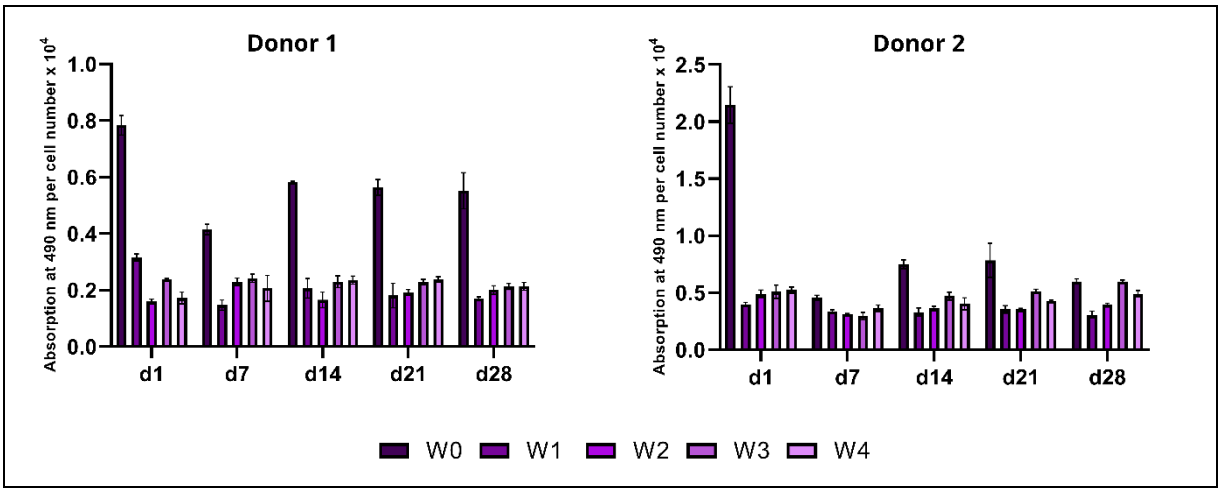

Figure S4: Relative DNA content specific LDH activity of DPSC embedded in printed and crosslinked scaffolds after 1, 7, 14, 21, and 28 days of cultivation. DPSC-laden Plasma-Alg-MC bioinks were used for bioprinting immediately after preparation (W0) and at different time points of bioink storage at 4°C (W1-W4); the bioinks were brought to room temperature before bioprinting.