Supporting Information

Low solid content moldable chitin physical hydrogel prepared by atypical rupture-free swelling

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Fig. S1. Photograph of chitin alcogel with sufficient Ac_2O (left, DA = 99.4%), cylindrical mould (centre), chitin alcogel with insufficient Ac_2O (right, DA = 81.7%). The grid square represents 1 cm.
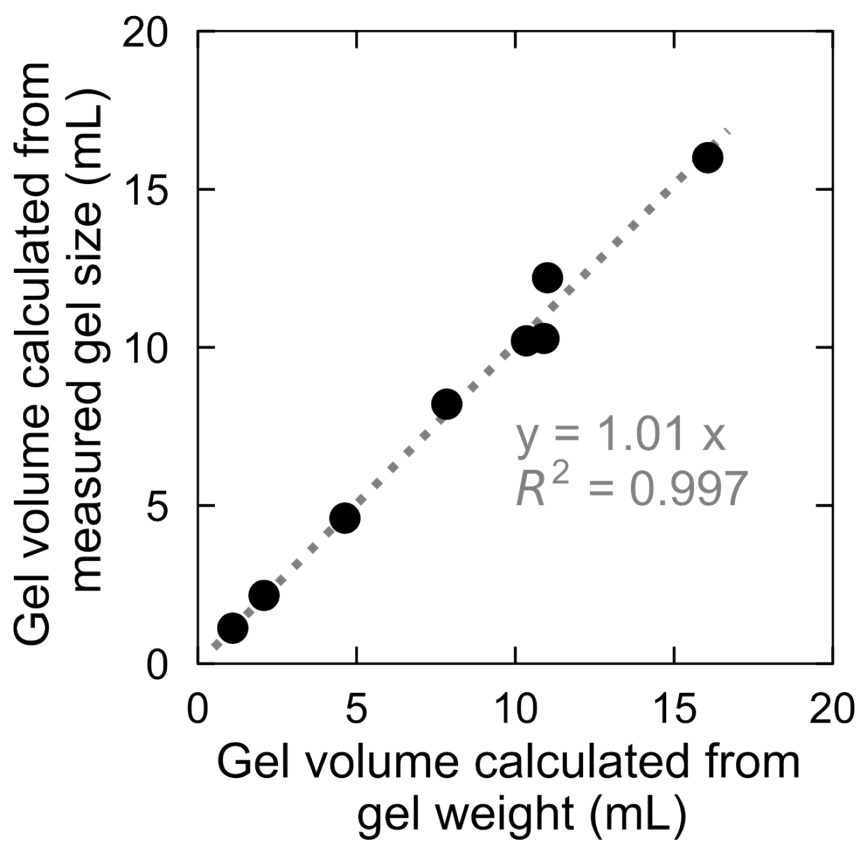
Fig. S2. Correlation of the calculated gel volume from the gel weight and the measured gel size.
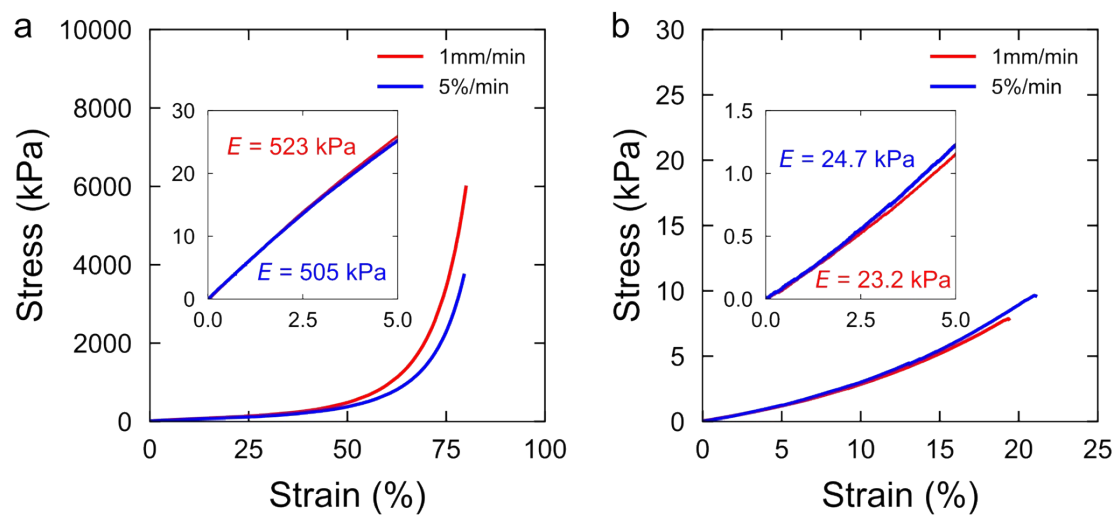
Fig. S3. Stress–strain curves of shrunk (volume change = 19%, DA = 99.4%) and (b) swollen (volume change = 207%, DA = 82.5%) chitin hydrogels measured under different test conditions (1 mm/min or 5% strain/min).

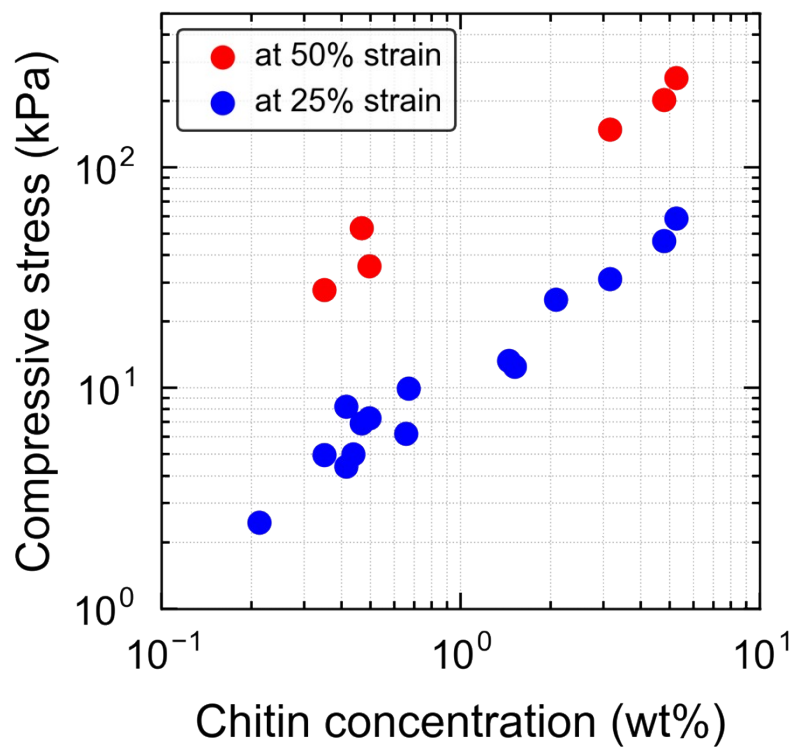Fig. S4. Photograph of the collapsed chitin hydrogel (DA = 78.8%).

Fig. S5. Compressive stress of the chitin hydrogels at 25% and 50% strain.

C (wt%)	E (kPa)
0.212	4.22
0.350	15.1
0.413	31.7
0.413	12.8
0.466	23.1
0.495	26.2
0.656	14.2
0.670	23.1
1.45	40.0
1.51	32.6
2.08	80.5
3.15	132
4.78	200
5.25	284

Table S1. Gel concentrations (C) and compressive moduli (E) of the chitin hydrogels.