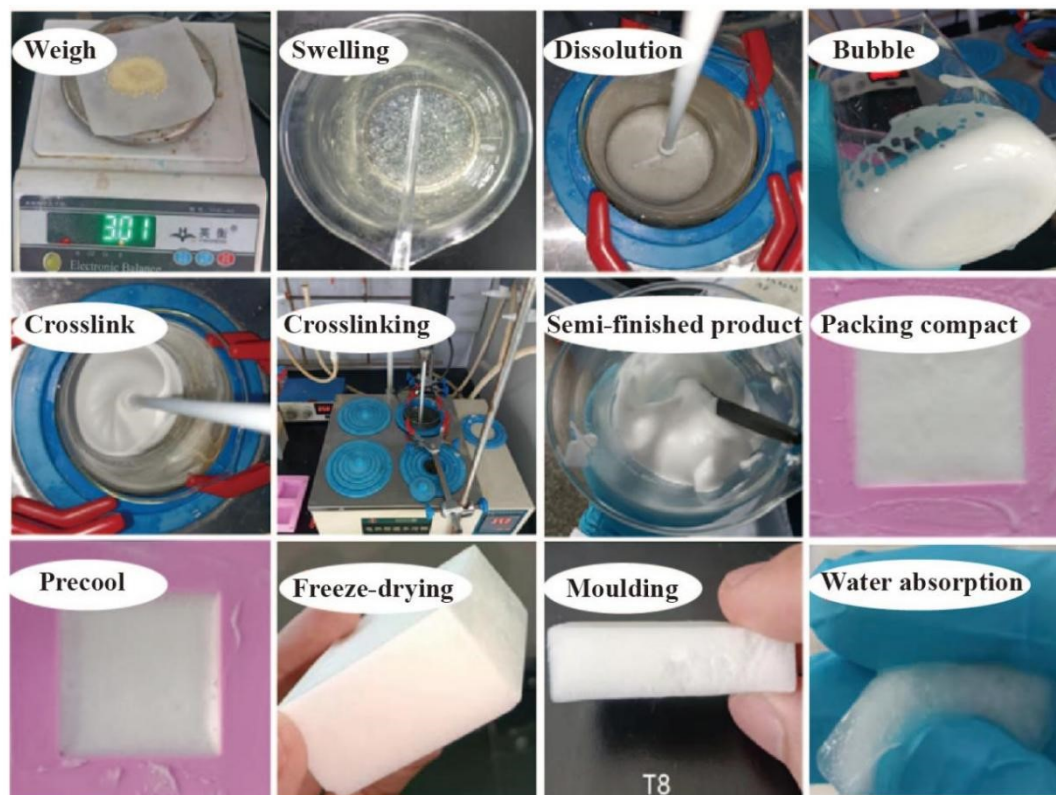


Supporting Information

Supplementary materials

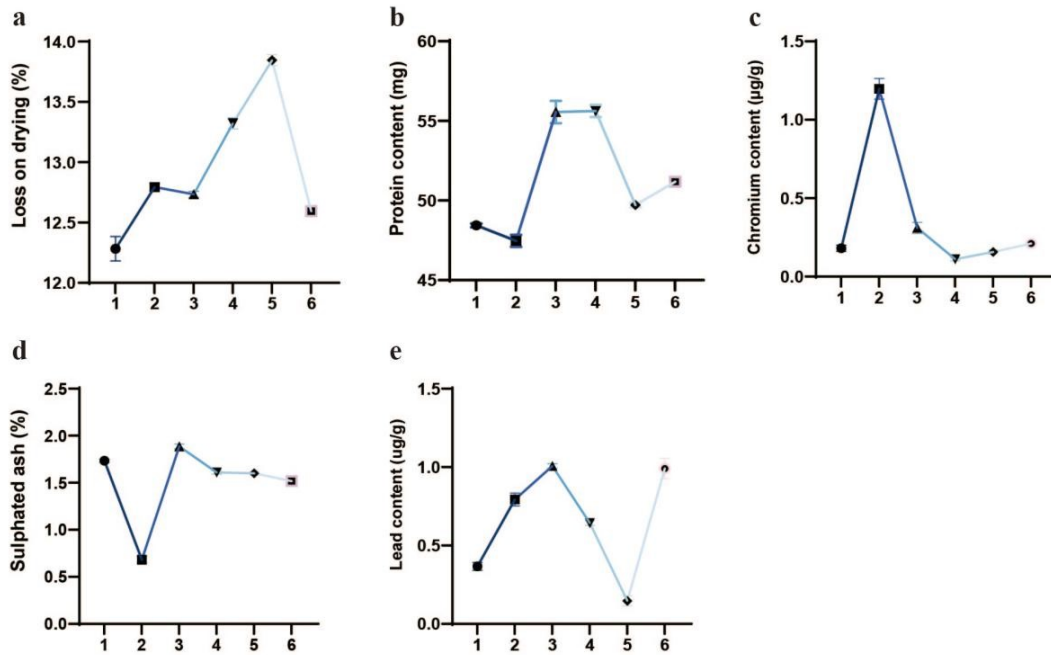


Supplementary Figure 1. The process of preparing gelatin.

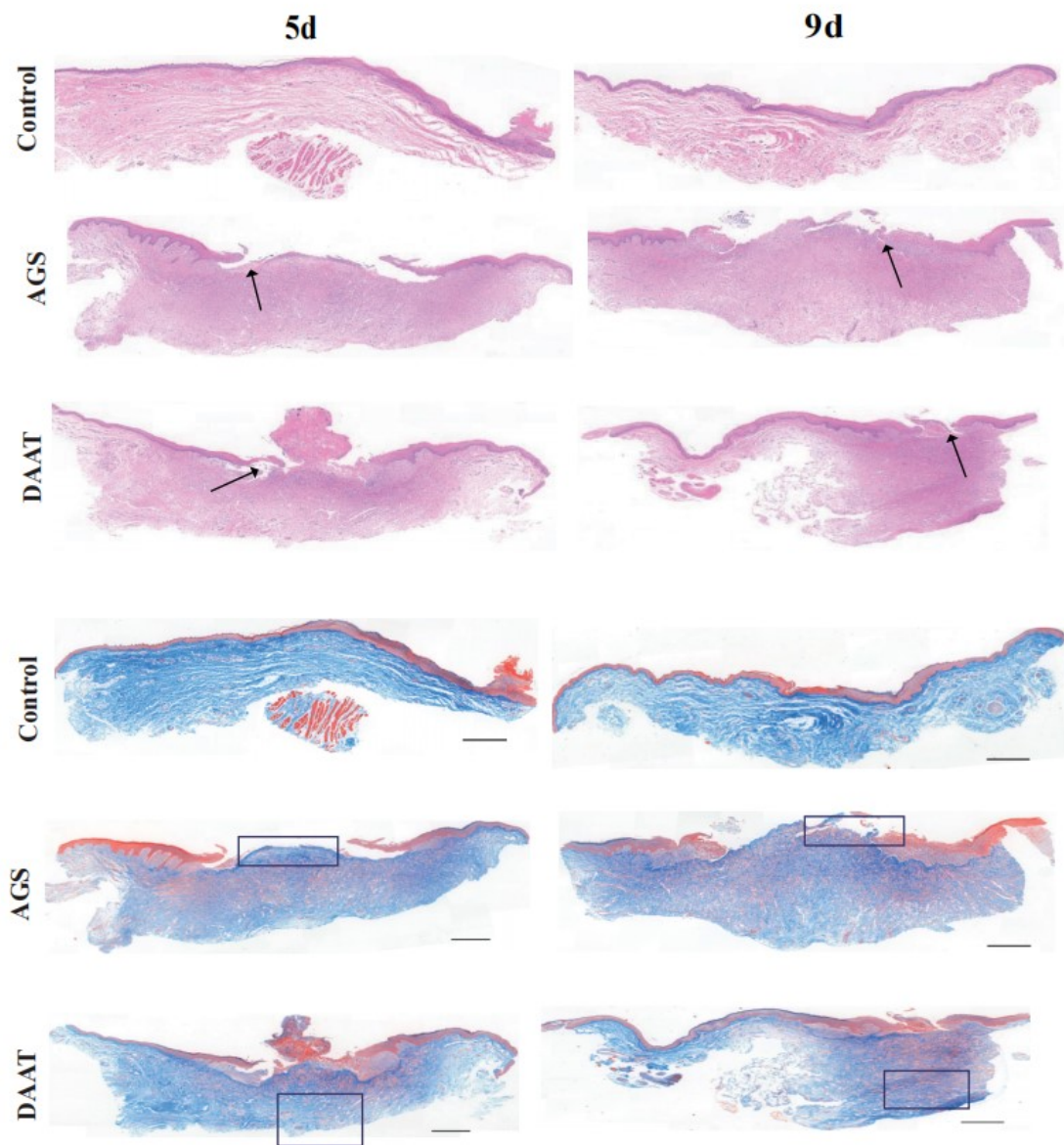
Supplementary Table.1 Summary table of AGS formulationscreening

results and selected optimal scaffold properties.

Factors Level	A Concentration of gelatin sponge(%)	B Formaldehyde concentration(%)	C Crosslinking temperature(°C)	Multiple of water absorption
1	3.5	1	30	25
2	3.5	2	35	30
3	3.5	4	40	57
4	3.5	6	45	41
5	5	1	35	51
6	5	2	30	45
7	5	4	45	53
8	5	6	40	28
9	6.5	1	40	47
10	6.5	2	45	44
11	6.5	4	30	29
12	6.5	6	35	55
13	8	1	45	71
14	8	2	40	65
15	8	4	35	46
16	8	6	30	31
T1	153	194	130	T=718
T2	177	184	182	
T3	175	185	197	
T4	213	155	209	
t1	38.25	48.50	32.50	
t2	44.25	46.00	45.50	
t3	43.75	46.25	49.25	
t4	53.25	38.75	52.25	
R	15.00	9.75	19.75	



Supplementary Figure 2. Preparation and characterization of PMVs-AGS. (a) The drying weight loss rate of absorbable gelatin sponge samples 1-6; (b) Determination of protein content in absorbable gelatin sponge samples 1-6; (c) Determination of chromium content in absorbable gelatin sponge samples 1-6; (d) Determination of sulphated ash content in absorbable gelatin sponge samples 1-6; (e) Determination of lead content in absorbable gelatin sponge samples 1-6.



Supplementary Figure 3. HE and Masson staining revealed enhanced epithelialization and collagen deposition in the control, AGS, and DAAT groups.