

Supporting Information

Fabrication of Oleogels via a Facile Method by Oil Absorption in the Aerogel Templates of Protein-Polysaccharide Conjugates

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S1. Methods:

S1.1. O-phthaldialdehyde (OPA) method

The degree of graft was determined according to the O-phthaldialdehyde (OPA) method described previously with slight modifications.¹ The OPA reagent was prepared freshly before use by mixing the following reagents: 40 mg of OPA dissolved in a mixture of 1 mL of methanol, 25 mL of 0.1 M sodium borate buffer (pH 9.85), 100 μ L β -mercaptoethanol, and 2.5 mL of 20% (w/v) sodium dodecyl sulfate in deionized water. The mixture was diluted with water to reach a total volume of 50 mL. Briefly, 4 mL of OPA reagent and 200 μ L of sample solution were mixed in the tube and then reacted at 35 °C in a water bath for 2 min. The absorbance of the reacted solution was measured immediately at 340 nm using a Tecan Infinite M200 Pro instrument (Mannedorf, Switzerland). A calibration curve was obtained by using 0.5 - 3 mM lysine as standard. The degree of graft was calculated based on the changes in the content of free amino groups using the following equation:

$$DG (\%) = \frac{C_1 - C_t}{C_1} \times 100 \quad (1)$$

where C_1 and C_t are the content of free amino groups of the mixture before and after incubation, respectively.

S1.2. The browning index

The conjugates were diluted to the concentration of 5 mg/mL with distilled water in order to obtain an optical density of less than 1.5. Then the browning index was measured at 420 nm using a Tecan Infinite M200 Pro instrument (Mannedorf,

Switzerland) based on the reported method with modifications.² All the experiments were carried out in triplicate.

References

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