

Supporting Information for:

Enhancing Stability of High-Concentration β -Tricalcium Phosphate Suspension for Biomedical Application

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I. Sedimentation of β -TCP suspension with different dispersants

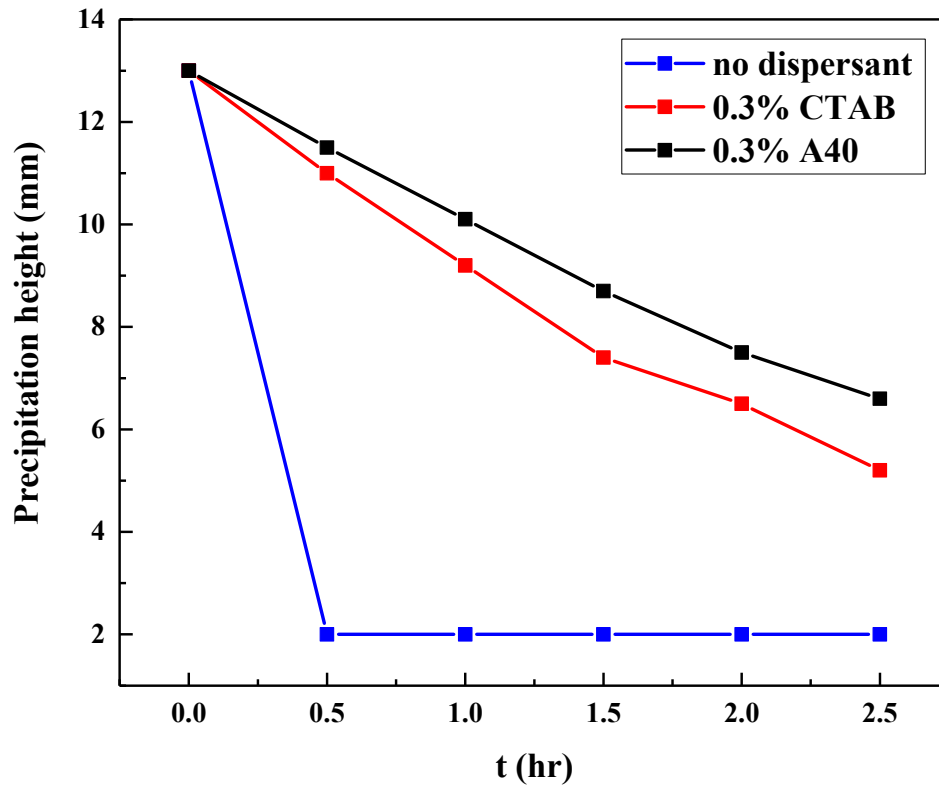


Figure S1. Sedimentation speed of β -TCP suspension with dispersants of different electronic property.

II. Comparison of β -TCP suspension with and without A40

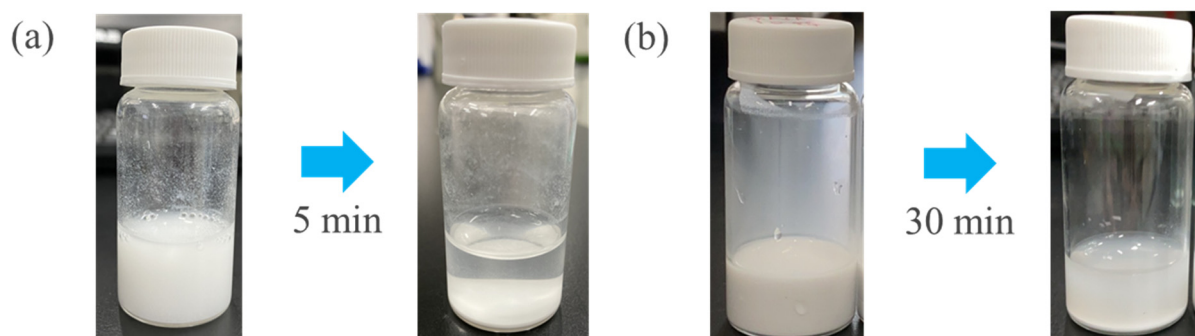


Figure S2. Comparison of suspension before and after adding dispersant (a) no dispersant (b) 0.3 wt% A40.

III. Image of β -TCP suspension with A40 and CNC but without ball milling

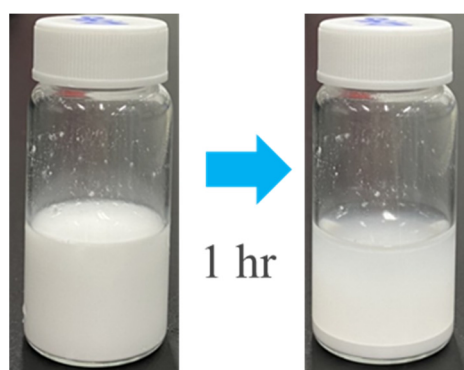


Figure S3. β -TCP suspension with 0.3 wt% A40 and 0.1% CNC without ball milling.

IV. TGA analysis of β -TCP suspension after resuspended

To understand the degradation of the TCP suspension, the TGA analysis of β -TCP is investigated. In **Figure S4(A)**, most of the water in the suspension evaporates at 70 °C and the residual weight remains almost consistent from 100 to 700 °C. However, when the **Figure S4(A)** is magnified to **Figure S4(B)**, it shows that the residual weight decreases slightly from 100 to 500 °C. Because the TCP powder would not degrade at that temperature[40], it can be concluded that the decrease of the residual weight is due to the degradation of the dispersant (A40 and CNC).

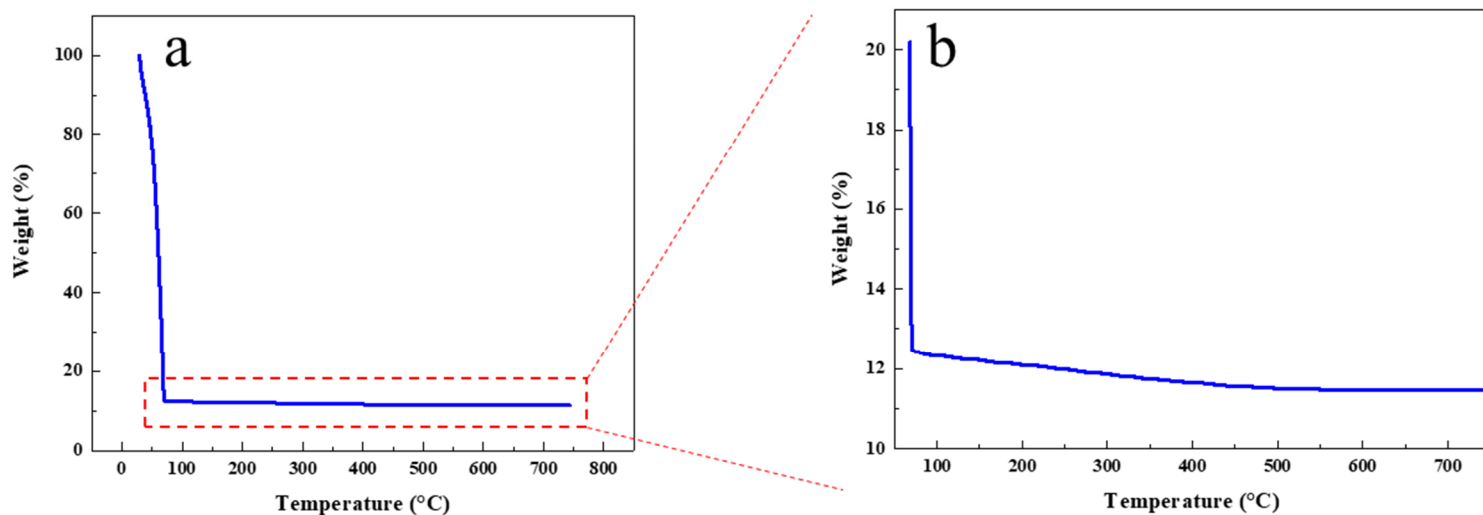


Figure S4. (A) TGA analysis of β -TCP suspension (B) magnified chart from TGA analysis.

Reference

40. Kumar, B. S.; Hemalatha, T.; Deepachitra, R.; Raghavan, R. N.; Prabu, P.; Sastry, T., Biphasic calcium phosphate–casein bone graft fortified with *Cassia occidentalis* for bone tissue engineering and regeneration. *Bulletin of Materials Science* **2015**, *38*, (1), 259–266.