



Supplementary

Microwave-assisted fabrication of mesoporous silica-calcium phosphate composites for dental application

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Supplementary Information SBA-15 standard rapid coating procedure microwave-assisted rapid coating procedure SBA-CaP(S) composites SBA-CaP(MW) composites Screening analysis FTIR, XRD, EDX SEM Type of calcium phosphate formed SBA-15 coated with formed calcium phosphate? Mineralization assay in SBF for 7 days No further investigation SEM CaP clusters observed? new peaks of HA phase? changes in Ca/P ratio? ↑ intensity of P-O bands? No Mineralization assay in SBF for additional 7 and 14 days No further investigation Final FTIR, XRD, SEM-EDX results

Figure S1. The flowchart of the study design: SBA-15-calcium phosphate composites synthesis and mineralization properties investigation.

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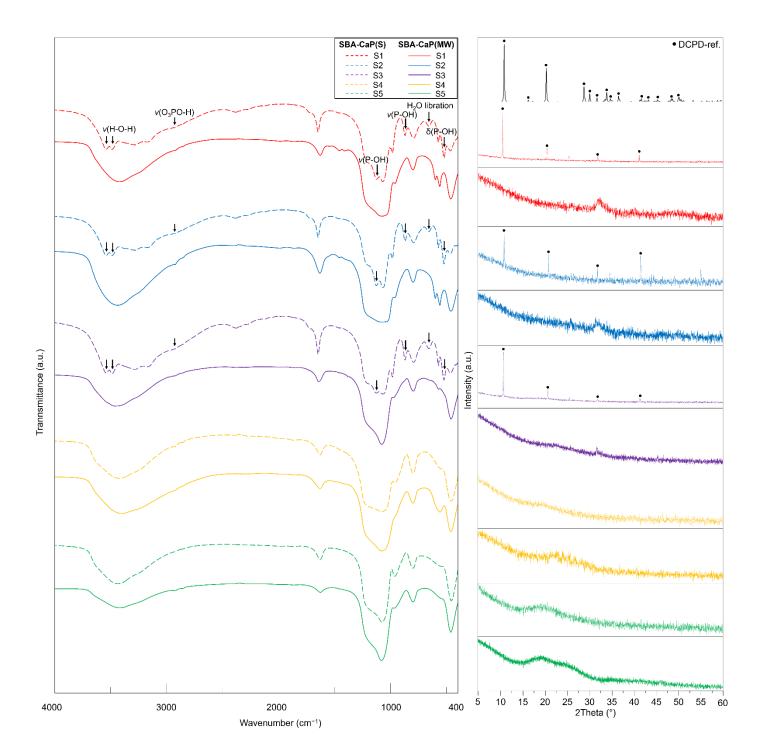


Figure S2. FTIR (left) and XRD (right) results of obtained SBA-CaP composites using standard (dashes) and microwave-assisted (straight lines) rapid coating procedures (types of vibration: ν -stretching, δ -bending). Arrows correspond to the vibrational modes characteristic for dicalcium phosphate dihydrate (DCPD).

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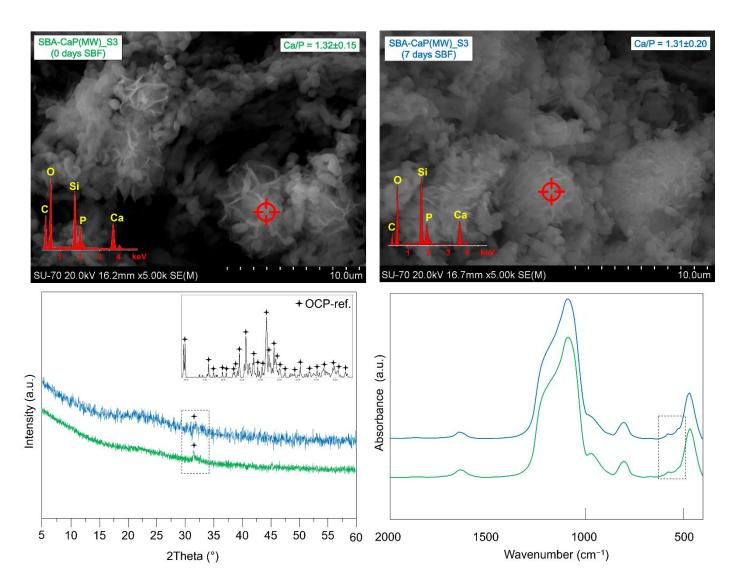


Figure S3. SEM-EDX, FTIR, and XRD results of SBA-CaP(MW)_S3 composite before (green) and after (blue) 7 days of incubation in simulated body fluid with marked areas confirming the poor mineralization potential of obtained composite.