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S1: XRD of Fe_3O_4 @maltodextrin nanoparticles refined by the Rietveld method.



S2: Scanning electron microscopy (SEM) images of Fe3O4@maltodextrin nanoparticles and magnetite.





S3: SEM/EDS analysis images: (A) SEM of the sample with nominal magnification of 2kx; (B) Fe map and (C) O map, obtained via EDS from Fe3O4@maltodextrin nanoparticles

S7

S8

S9



50µm

50µm

50µm

50µm



S4: Size distribution of Fe_3O_4 @maltodextrin nanoparticles in water, in triplicate.

S5: Magnetization curves of Fe₃O₄@maltodextrin and magnetite nanoparticles under the action of external magnetic fields close to zero

