Supplementary Information

Boronic acid-functionalized Fe_3O_4 nanoparticles for activity-preserved enrichment of low-abundance bacteria from real samples

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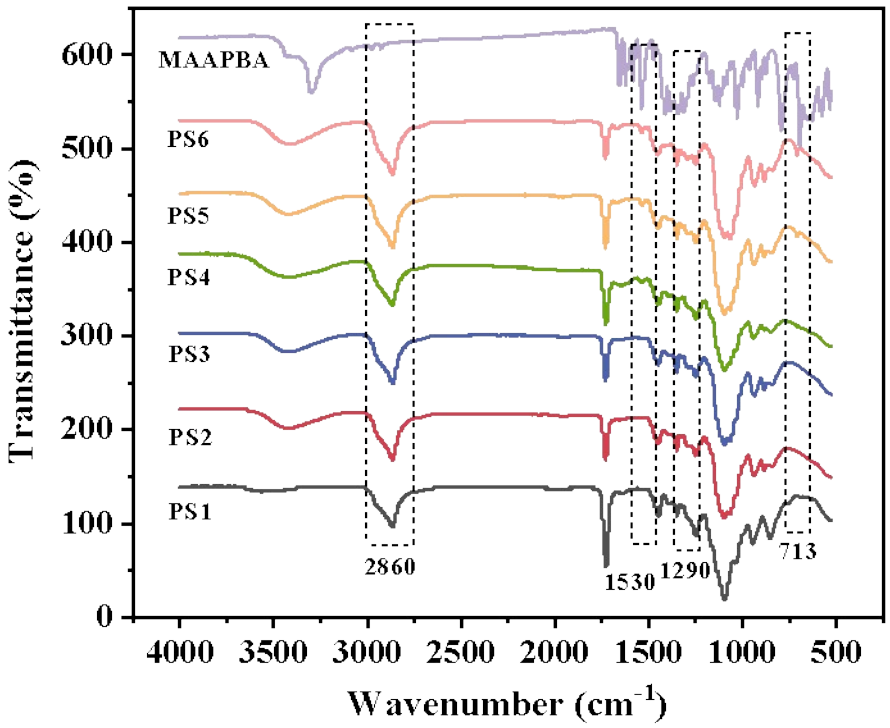

Supplementary Figure 1. FTIR spectra of *PS1*, *PS2*, *PS3*, *PS4*, *PS5*, *PS6,* and3-the functional monomer methacrylamidophenylboronic acid (MAAPBA).

The mass ratios of MAAPBA to PEGDA were 1:200, 1:100, 1:50, 1:10, and 1:5, and the copolymers without *NPs* were named herein as *PS2*, *PS3*, *PS4*, *PS5*, and *PS6,* respectively. The obtained poly(PEGDA) without *NPs* was named *PS1* herein. There were no obvious differences in the FTIR spectra of *PS1* and *PS2* when compared with that of *PS1*. With increasing the amount of MAAPBA, two characteristic peaks associated with MAAPBA at approximately 1530 cm^{-1} and 713 cm^{-1} appeared in the spectra of *PS4*, *PS5*, and *PS6*. These peaks were attributed to the flexural vibrations of N-H groups and the benzene ring vibrations. These results proved that MAAPBA could copolymerize with PEDGA to form the capping copolymers of Fe_3O_4@SiO_2@*TPM NPs*.