

### Trypsin Coated Magnetic Nanoparticles for Protein Digestion

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Protein digestion is a critical step in bottom-up proteomic analysis, but takes a long time due to the poor stability of digestive enzyme called trypsin. In the present work, we prepared trypsin-coatings on magnetic nanoparticles (EC-TR/NPs) by performing a simple step of glutaraldehyde crosslinking. The resulting trypsin-coated magnetic nanoparticles (EC-TR/NPs) were highly stable by showing negligible activity loss after recycled uses under continuous shaking for 27 days. Highly stable and magnetically separable EC-TR/NPs were successfully employed in protein digestion for proteomic analysis.