

PW20 Evaluation of labile detergents, and organic/aqueous solutions, for the enhancement of in-gel trypsin digestion of proteins.

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ProteasMAX, Rapigest SF, in-gel digest, labile detergents, digestion efficiency

In-gel trypsin digestion of proteins was enhanced with labile detergents and organic solvents.

In-gel trypsin digestion of proteins is one of the most common treatments in modern proteomic analysis. This is generally followed by mass spectrometric analysis to identify and characterize the resultant peptides. However, both protein digestion, and the extraction of peptides from an in-gel digest is invariably incomplete. The advent of new labile detergents allows enhancement of the enzymatic digestion and peptide extraction with minimum interference to the mass spectrometric analysis. We evaluate two commercially available labile detergents (Rapigest SF (Waters) and ProteasMAX (Promega)), and compare the effectiveness of these with the addition of organic solvents to the digestion mixture, presenting the effects on digestion and extraction efficiency, and the subsequent mass spectrometric analysis.