
一般講演 | A 食品成分, 食品分析 (Food Ingredients, Food Analysis)

[2Cp] 食品分析

座長: 氏田 稔(名城大学)、谷 史人(京都大学)、加藤 毅(日本食品分析センター)

2024年8月30日(金) 15:00 ~ 18:00 C会場 (3F N323)

16:00 ~ 16:15

[2Cp-05] Development of Amine Derivatization LC-MS/MS Technique for Non-Targeted *De Novo* Peptide Sequencing in Rat Plasma After Soy Protein Administration

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キーワード: N-スクシニミジル-7-メトキシクマリン-3-カルボキシレート (クマリン)、ペプチドミクス、LC-MS/MS、アミン誘導体化、デノボシーケンシング

Purpose: This study aimed to develop a novel peptide identification method using amine derivatization techniques for *de novo* sequencing of peptides, addressing challenges in non-targeted peptides analysis in rat plasma after soy protein isolate (SPI) administration. **Methods:** Peptides were derivatized with various amine derivatization reagents including *N*-succinimidyl-7-methoxycoumarin-3-carboxylate (Cou) and then applied to LC-qTOF/MS for comparison. **Results:** Compared to other derivatization methods, Cou derivatization-aided LC-MS/MS method found that peptide bond cleavage occurred sequentially from the N-terminus of the coumarin tag. The present method achieved peptide sequencing up to 10 residues and identified a variety of oligopeptides from plasma of male SD rats after ingestion of SPI.