



MetAmino[®]
ChromLine

ANALYSIS OF BEE GUTS

ABSTRACT

A simple and fast LC-MS method for analysis of dynamics of amino acids in honey bees gut was developed. For rapid, high-efficiency sample preparation LC-MS MetAmino[®] kit was used.

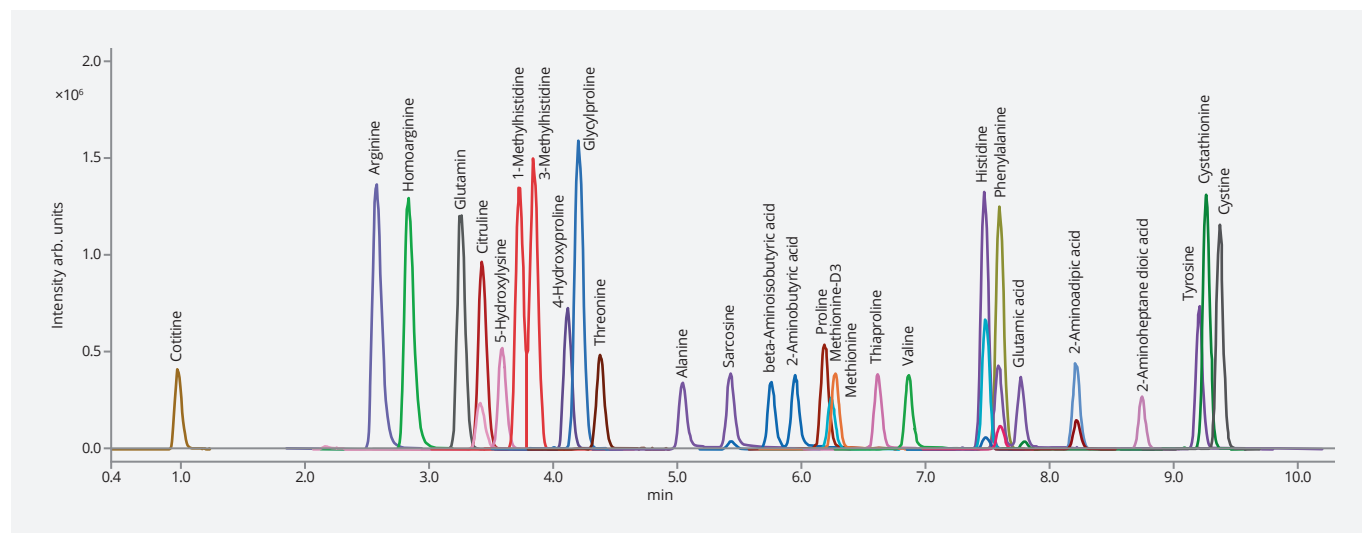
INTRODUCTION

The symbiotic interaction between host and gut microbiota plays a crucial role for nutrient absorption and the host health. The honey bees have a specialized and consistent gut microbiota that makes them a good model to study the mutual impact of the microbiota and the host. This study aimed to investigate gut amino acid dynamics in honey bees after the application of beneficial bacterial supplementation in a real colony condition. The amino acids profiles were tested by LC-MS MetAmino[®] kit.

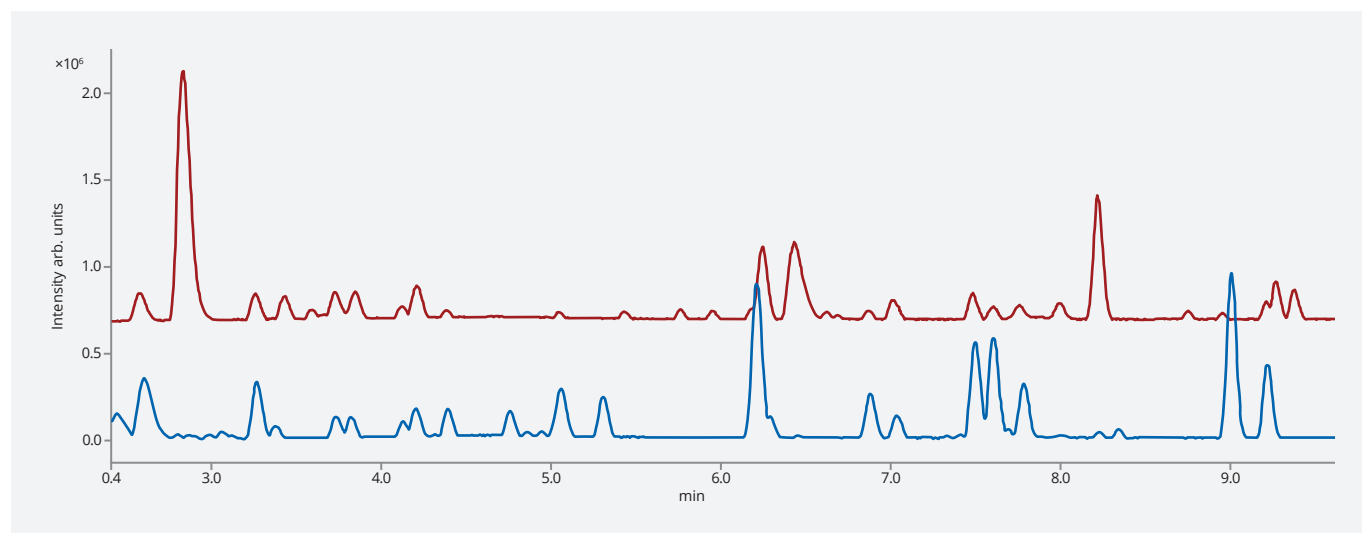
Analysis of bee guts

The sample preparation: According to the MetAmino kit protocol.

The chromatographic conditions: LC-MS method according to the MetAmino kit protocol.

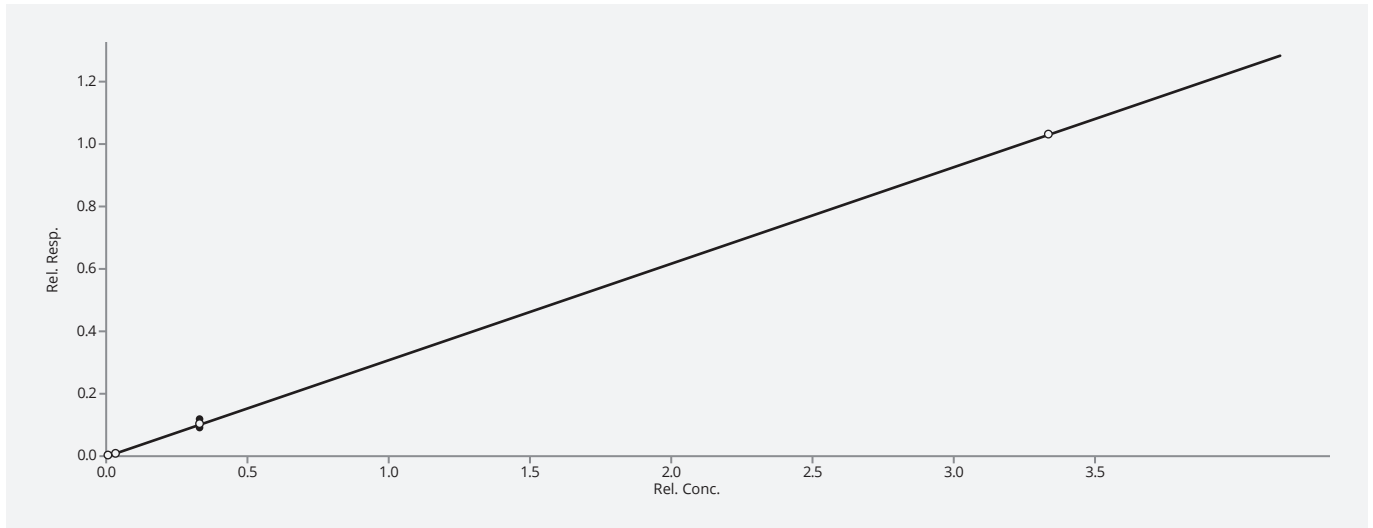


Standard mixture – LC MetAmino[®] kit; mass extracted chromatogram; 5 nmol SD1 and SD2 according to the manual [1].

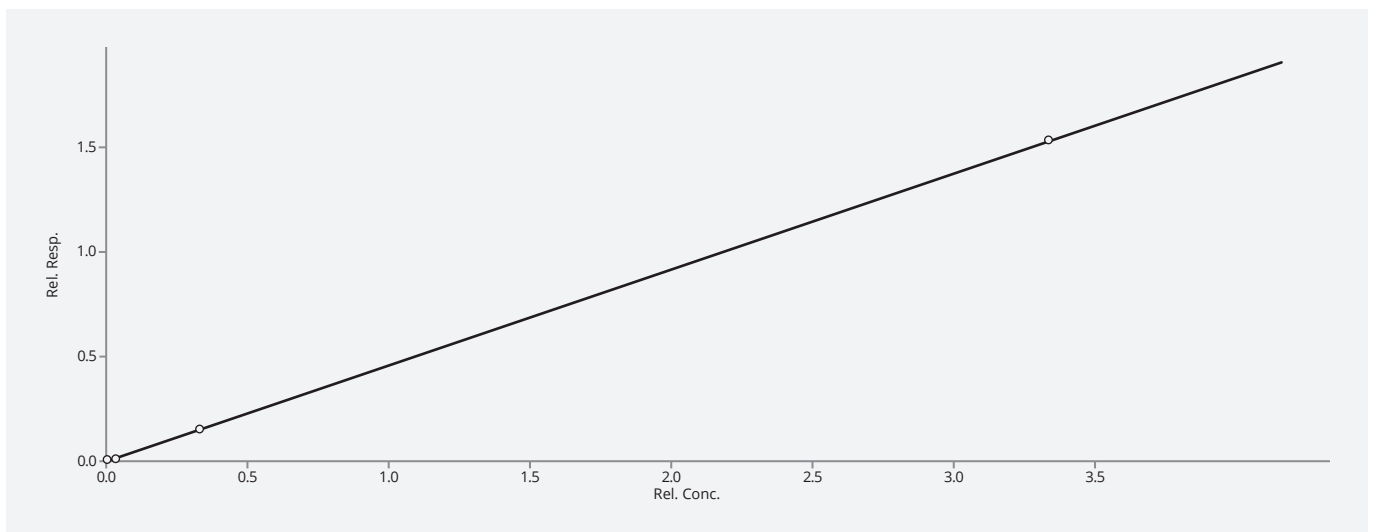


Comparison of calibration standard (top) with pooled QC sample (bottom)

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Calibration of Isoleucine with Homophenylalanine ISTD



Calibration of Methionine with Methione-D3 ISTD



The premium product brand of Chromservis s.r.o.



This application was developed by Faculty of Agrobiolgy, Food and Natural Resources of Czech University of Life Sciences Prague (CZU)



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