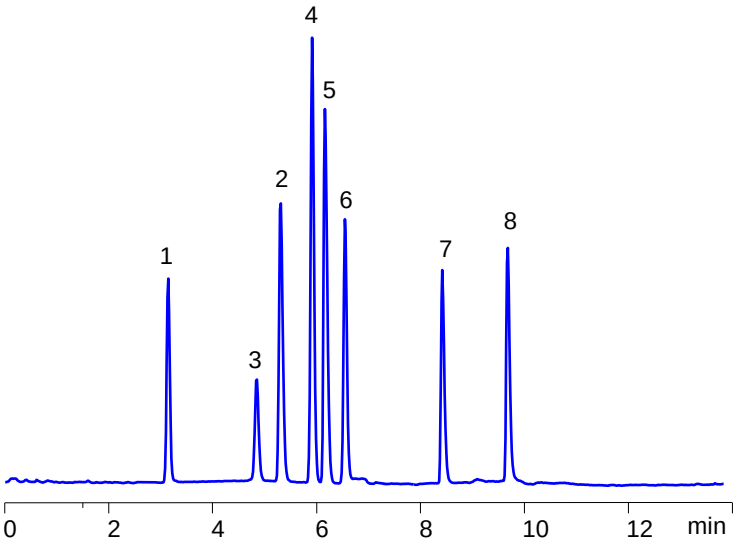
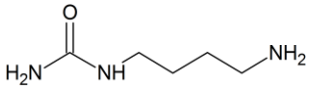
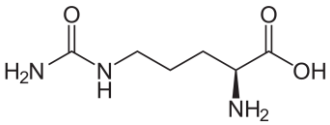
HPLC Analysis of Compounds in Arginine-Polyamine Metabolic Pathway with LC-MS Conditions on Amaze MH Mixed-Mode HILIC Column



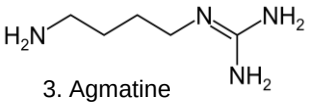
Column:	**Amaze MH** (Metabolites HILIC)
Dimensions:	3.0x100 mm, 3 um, 100A
Mobile phase:	ACN/Water/AmFm/Formic acid
Detection:	ELSD, 45°C



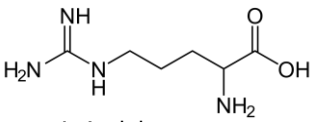
1. N-Carbamoylputrescine



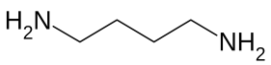
2. Citrulline



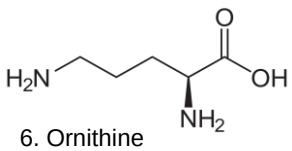
3. Agmatine



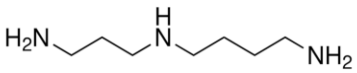
4. Arginine



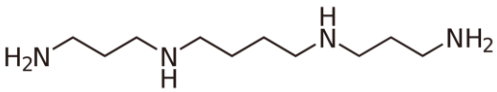
5. Putrescine



6. Ornithine



7. Spermidine



8. Spermine

Application Notes

This application note is one of the studies devoted to the analysis of the analysis of compounds in various metabolomic pathways.

The Arginine-Polyamine metabolic cycle encompasses a series of biochemical reactions critical for cellular functions, including cell growth and differentiation. Key metabolites in this cycle include arginine, agmatine, ornithine, citrulline, carbomoylputrescene, and the polyamines putrescine, spermidine, and spermine. All compounds in a pathway are highly polar and ionic analytes with poor retention and poor peak shape on traditional HILIC and reversed-phase columns. We have developed a simple HILIC mixed-mode approach to analyze compounds in the Arginine-Polyamine metabolic pathway. The method uses low concentrations of ammonium formate and formic acid to achieve highly symmetrical and well-separated peaks. Contact us if you need help with any HPLC method development. We are highly efficient and affordable