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Autor(en) des Beitrags: Dunkel, Andreas; Hofmann, Thomas

Titel des Beitrags: Sensory-directed identification of beta-alanyl dipeptides as contributors to the thick-sour and white-meaty orosensation induced by chicken broth

Abstract: Sensory-directed fractionation of a double-boiled chicken broth using ultrafiltration, gel permeation chromatography, PFPP-HPLC, and HILIC combined with analytical sensory techniques led to the identification of beta-alanyl-N-methyl-l-histidine, beta-alanyl-l-histidine, and the previously unreported beta-alanylglycine as the key contributors to the thick-sour orosensation and typical white-meaty character of chicken broth. Quantitative analysis, followed by taste recombination and omission experiments, revealed for the first time that, when present together with l-glutamic acid and sodium and/or potassium ions, subthreshold concentrations of these beta-alanyl peptides enhance the typical thick-sour orosensation and white-meaty character known for poultry meat, although these taste-modulatory peptides exhibited only a faint sour and slightly astringent intrinsic taste when tasted individually.

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