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Czech J. Food Sci.

**Kabelová I., Dvořáková
M., Čížková H.,**

Dostalek P., Meizoch K.:

Determination of free amino acids in cheeses from the Czech market

Czech J. Food Sci., 27 (2009): 143-150

High performance liquid chromatography (HPLC) method with the pre-column derivatisation by AccQ•Tag agent and following determination of these derivatives after their separation in reverse phase column followed by fluorescent detection was used for the determination of amino acids in cheeses. The contents of sixteen free amino acids in twenty five cheeses commercially available in the Czech Republic were measured. The total content of free amino acids in the studied cheeses varied in the range from 27 g/kg to 160 g/kg. Among individual amino acids, seven amino acids were more concentrated in all cheese samples and came from three distinctive taste groups: bitter tasting amino acids (leucine, lysine, and phenylalanine), bitter sweet amino

acids (proline and valine), and salty-umami amino acids (glutamic acid and aspartic acid). The differences in the contents of the total and individual free amino acids were influenced by the kind of cheese and mainly by the duration and intensity of proteolysis.

Keywords:

amino acids; cheese; HPLC; pre-column derivatisation; 6-aminoquinolyl-N-hydroxy-succinimidyl carbamate (AQC); fluorescent detection

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