A mechanistic study on the fragmentation of peptide-derived Amadori products.

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Streszczenie

Gas phase fragmentation of peptide-derived Amadori products was investigated using synthetic compounds regioselectively deuterated as well as labeled with 18O at aminofructose moiety. The eliminated molecule CH2O contains exclusively protons attached to carbon C6 of the aminofructose moiety. The hydrogen atoms connected with the carbon C1 of the aminofructose moiety are partially eliminated as a component of water molecules during the dehydration process and partially dislocated within the fragmented peptide molecule. The labeled oxygen atom attached to the carbon C2 is eliminated in 100% along with the first loss of water. The MS3 experiments revealed that the product ion formed by triple dehydration of the Amadori product does not eliminate the formaldehyde molecule. On the basis of these observations we proposed a hypothetical mechanism of Amadori products' fragmentation.

Adres publiczny

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