

The Enthalpies of Formation of Asparagine and Glutamine

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The energies of combustion of hydrated and non-hydrated asparagine and of glutamine were measured by means of bomb calorimetry. Enthalpies of dehydration of hydrated asparagine and of fusion of all investigated compounds were measured by means of DSC. The corresponding standard enthalpies of formation in crystalline and liquid states were obtained and compared with values calculated by means of group additivity. Comments are made about the stability of the investigated molecules and about reactions involving them together with the corresponding amino acids.