

## Complexation of thiacalix[4]arene methylphosphonic and sulphonic acids with amino acids

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### Abstract

In this paper, host-guest complexation process of thiacalix[4]arene tetrakis-methylphosphonic and tetrakis-sulphonic acids with amino acids by HPLC and molecular modelling methods has been studied. It was shown that thiacalix[4]arene tetrakis-methylphosphonic acid due to transformability of macrocyclic skeleton and flexibility of methylphosphonic substituents can adopt its conformation for strong multicentre binding of the amino acids with association constant values 530-10,140 M<sup>-1</sup> in water. © 2013 Taylor & Francis Group, LLC.

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### Keywords

amino acids, HPLC, molecular modelling, thiacalixarene methylphosphonic acids, X-ray analysis