## 10. Abstract

*$C_3$* – symmetrical α-cyclodextrin derivative possessing three thioacetylic groups in positions $C6^{I}$, $C6^{III}$ a $C6^{V}$ was synthesized as precursor for preparation of rigid dimer linked by three disulfidic bridges. In the first synthetic step, $C6^{I}$, $C6^{III}$, $C6^{V}$ hydroxylic groups were protected with trityl groups. The remaining hydroxylic groups were benzylated. Subsequent detritylation gave rise to trihydroxy derivative, which was then converted to tribromide. This derivative was converted to trithioacetate. $C_3$ – symmetrical dimer was prepared by oxidative coupling of this precursor in basic solution. Stability constants of complexes of $C_3$ – symmetrical dimer with three α, ω – diols ($C_{10}$, $C_{12}$, $C_{14}$) were measured by microcalorimetrical titration. Stability constant increased with growing chain length of the diol ($K_{as}(C_{14})$ = $3{,}02.10^{7}$ $M^{-1}$). Another two trithioacetylic precursors with $C_1$ symmetry were synthesized. They were also used for preparation of dimers. Four dimeric products were obtained after oxidative coupling of these precursors – their exact structure could not be determined by NMR analysis.

**Keywords:** rigid dimer / disulfidic bridge / α–cyclodextrin / tritylation / benzylation / oxidative coupling / microcalorimetry / stability constant