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## YUGOSLAV MATERIALS RESEARCH SOCIETY 2007

Hotel "Plaža", Herceg Novi, Montenegro, September 10-14, 2007  
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## Programme and The Book of Abstracts

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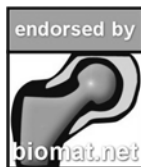
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*P.S.E.21*

**EVALUATION OF GLASSIONOMER CEMENT APPLICATION FOR PERMANENT  
BINDING OF PROSTHETIC DENTURES**

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Fixed dentures are created in order to rehabilitate the function of orofacial system, to correct disordered interdental relation, as well as the relation between jaws and to do esthetic correction. Binding of fixed dentures to the teeth carriers is done with a layer of binding biomaterials from the group of dental cements. Cement as the choice of dental biomaterials has to be the best cement for the most frequent, routine management for these type of works and most frequently used materials – metal, acrylate, ceramics. Cement must be safe to use with patients. Ideally, it must have longtime advantages such as to be for various uses, to find the right balance between results and simplicity of application, which are the most important for routine management. There are many types of cement. In this study, Zn-phosphate and glassionomer cement were used. In modern dental technology, production of cement is well developed and the most concerns are about non-toxicity, biocompatibility, bioinertion, biofunction. In some cases acidic balance disorder of saliva medium can bring to release of low doses of heavy metal ions after the reaction of cement and heavy metal ions from dental compounds. In this study, the best results were achieved with glassionomer cement, because the lowest percent of released heavy metal ions in saliva medium was noticed after cementing of fixed dentures by glassionomer cement. Because of its characteristics, glassionomer cement can be the choice material for permanent cementing of fixed prosthetic dentures.

*P.S.E.22*

**BOVINE SERUM ALBUMIN (BSA) ION INTERACTION FOLLOWED BY ITC**

S. Ostojić, M. Kićanović

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Interaction between Bovine Serum Albumin (BSA) and several biological metal ions ( $\text{Ca}^{2+}$ ,  $\text{Mg}^{2+}$ ,  $\text{Cu}^{2+}$ ,  $\text{Zn}^{2+}$ ,  $\text{Na}^+$ ) have been studied by Isothermal Titration Calorimetry (ITC). Thermodynamical parameters (H - enthalpy of binding, K - binding constant and N - number of binding sites) of protein/ion interaction were obtained. Possibility of BSA usage, as potential ion delivery agent, in protein drug delivery system was discussed.