# Z-006

## Influence of periods of preparation and exposition of eluates from ocular prosthesis acrylic resin in human conjunctival cell line

Nobrega AS*, Silva EVF, Bonatto LR, Santos DM, Oliveira SHP, Goiato MC
Faculdade de Odontologia de Araçatuba, UNESP

**Objectives**

The knowledge of proper technique for ocular prosthesis manufacturing, aiming to reduce potentially toxic substance release to users, is important to ensure the material biocompatibility. The aim of this study was to evaluate the influence of different preparation and exposition periods of eluates from ocular prosthesis N1 color acrylic resin in human conjunctival cell line, through the analysis of the cell proliferation and the production of proinflammatory cytokines and extracellular matrix proteins.

**Methods**

A total of 24 acrylic resin samples were manufactured and divided into 2 groups according to the eluate exposition period to conjunctival cell line (24 and 72 hours). Eluates corresponding to 24, 48 and 72 hours of resin sample immersion in medium and 24 hours of resin sample immersion in water followed by 24 hours of immersion in medium were prepared. The cytotoxic effect from the eluates was evaluated using MTT assay with Chang conjunctival cells. The production of IL1β, IL6, TNF α and CCL3/MIP1α was evaluated by ELISA and mRNA expression of COL IV, TGF β and MMP9, by RT-PCR. Data were submitted to ANOVA followed by Bonferroni test ($p<.05$). To evaluate the difference between the immersion periods of the eluates in contact with the cells, Student's t-test was used ($p<.05$).

**Results**

At 72 hours of eluate exposition to cells, significant quantities of IL6 and mRNA expression of COL IV were verified in comparison to 24 hours. After the exposition, for 72 hours to cells, of eluates corresponding to 72 hours of resin sample immersion in medium, lower cell proliferation and higher IL6 quantities and mRNA expression of COL IV, TGF β e MMP9 were observed.

**Conclusions**

Longer preparation and exposition periods of eluates from the tested resin to human conjunctival cell line are associated with higher production of proinflammatory cytokines and extracellular matrix proteins.