

## Corrosion Behavior of Some Old Dental Alloys

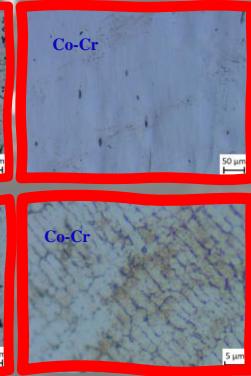
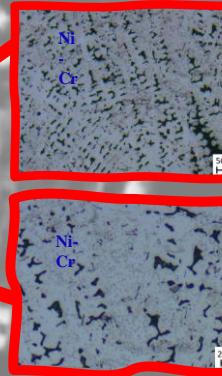
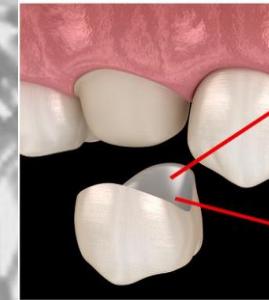
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The use of dental alloys as a material for bridges, crowns and prostheses is currently being investigated, taking into account their biocompatibility, as the material must be non-toxic and not cause allergies, inflammation or other reactions affecting the body. In this field, Co-Cr and Ni-Cr based alloys are often used, as they have good corrosion resistance and high wear resistance due to the crystalline nature of cobalt and nickel. In addition, Ni-Cr and Co-Cr alloys have been used in the field of dentistry for porcelain or porcelain-fused-to-metal crowns due to their good biocompatibility, wear resistance, long service life, good mechanical properties and superior corrosion.

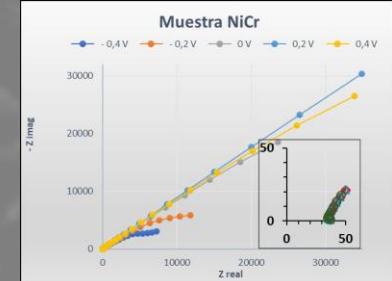
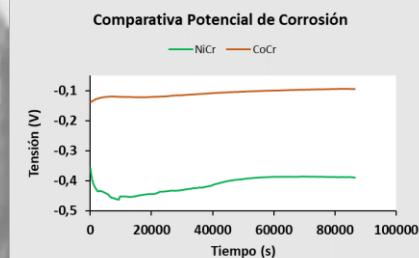
## EXPERIMENTAL MATERIALS



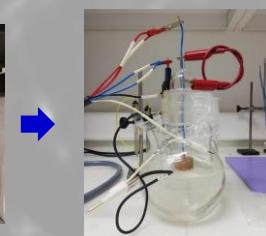
## RESULTS



## SURFACE PREPARING



## METALLOGRAPHY ANALYSIS



After electrochemical etching, the metallographic test is carried out by taking images with the metallographic microscope and by electrochemical test consisting in inserting a specimen into an electrochemical cell together with Saturated Calomel Electrode (SCE) as reference and Pt electrode as counter electrode. Corrosion potential ( $E_{corr}$ ) was measured and Electrochemical Impedance Spectroscopy (EIS) was applied.