

**Immunological and Microbiological
Assessment of Maxillary Acrylic Resin
Complete Dentures Reinforced by Gold
Plated Cr-Co Palatal Plate**

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A. Use of gold in complete denture:

The alloys which are still used in dentistry nowadays, are placed within several groups. These are the noble ones, that have a high content of noble metals (gold, platinum, palladium), and the non-noble metals (base metals). Gold alloys have been used in dentistry since 1932. Back in that time, after several attempts to mix gold with silver, copper or platinum, these alloys were categorized in the following way: soft, mid, hard, super-hard. It was quickly noticed that gold alloys (with gold content lower than 65%) corroded too quickly. This problem was solved in 1948, when palladium was added. Later, in the 1950s, gold alloys were supplemented with platinum. This lowered its expansion and improved the connectivity of metal and ceramics.

Gold is a metal that has been known for hundreds of years. Thanks to its properties, among these being specific weight of 19.3, melting point 1062°C, boiling point 2600°C, ductility and plasticity, as well as thermal or electric conductivity, it is frequently used in everyday dental practice, chiefly as a substructure for prosthetic restorations.

Today, gold is widely used in prosthetics. Its use ranges from being employed in the fabrication of removable dentures, where the inner surface permanently touching oral cavity tissues, through to fixed dentures, and even some structures of

certain implantological systems. All such items can be made of galvanized gold. Thus, new technologies have made gold and its alloys a kind of a universal material.

B. Statistical Analysis:

Data were presented as means and standard deviation (SD) values. The comparison between any two groups were done using independent t-test (Student`s t-test).

Statistical analysis was performed with SPSS 20® (Statistical Package for Social Science) and Microsoft Excel2010. The significant level was set at $P \leq 0.05$.