

Samples were prepared to be used as a material for the manufacture of prosthetic limbs by adding Nanosilver and Nano-lead oxide to the PMMA polymer, and a fixed percentage of silver nanoparticles (0.05) was chosen and the lead oxide ratios were changed to be (0.05, 0.1, 0.15, and 0.2) to obtain four Samples by adding these materials to the PMMA base. This study focuses on synthesizing and characterizing a novel (PbO-Ag)-PMMA nano composite for use in artificial limbs, with the goal of improving its mechanical properties, biocompatibility, and durability to create a better alternative to current prosthetic materials. Nanosilver and Nano-lead oxide to the PMMA polymer are good materials in the manufacture of prosthetics to use for artificial limbs. Good results were obtained showing the suitability of the samples as good material in the manufacture of prosthetics.