



**ATTAINMENT OF HYDROGELS BASED ON PVP/ SODIUM ALGINATE CONTAINING
PSEUDOBOEHMITE NANOPARTICLES TREATED WITH OCTADECYLAMINE FOR APPLICATIONS IN
PHARMACOS**

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A hydrogel is a polymeric material that shows ability to absorb and retain a significant amount of water in its structure, but does not dissolve in water. Due to the high degree of hydration of the gel, it has low mechanical strength, which is one of the biggest problems in its use. In this work the properties of the hydrogel based on PVP/sodium alginate containing pseudoboehmite nanoparticles treated with octadecylamine for applications in pharmacos were studied. The purpose was the gradual release of the drug when immobilized in the matrix of PVP/sodium alginate/pseudoboehmite. The pseudoboehmite nanoparticles were obtained by the sol-gel process, using aluminum nitrate and ammonia as precursors and then were treated with octadecylamine. The hydrogels based on PVP/alginate/treated pseudoboehmite was prepared by electron beam radiation, with dose at 25kGy. The hydrogels characterization was realized by mechanical tests (tensile tests) and physicochemical tests (swelling and sol/gel fraction).