

Formulation of a Coating for Tablets Based on Carboxymethylcellulose of *Opuntia* spp.

Cordova Rivera, Ivan (School: Marina High School)

Blancas Najera, Maria (School: Mission Hills High School)

Fernandez Valencia, Vianney (School: Srednja Gradbena Sola in Gimnazija Maribor II Gimnazija Maribor)

The constant innovation and search for new technologies is a fundamental part of the development of the national pharmaceutical industry, which has an integral implication in the development and improvement of medicines currently used, as well as to solve the productive and stability problems that some commercial coatings, such as reconstitution, disintegration time, permeability to moisture and oxygen and others. The collateral impacts mainly correspond to the economic development for our region and implicit the generation of a company that promotes jobs and achieves the productive development, besides reducing the use of the biomass through the combustion of the cladodes of dry nopal and generating a useful product since the community of the valley of Teotihuacan depends mainly on tourism; handicraft processing, nopal cultivation and prickly pears for human consumption. The hypothesis to be verified: if it is possible to extract cellulose from the mature *Opuntia* cladodes and convert it to carboxymethylcellulose, then it is feasible to formulate a coating for tablets by incorporating a plasticizer-adherent system that has a better performance against oxidation, better distribution of the coating on the surface and in addition to decreasing the disintegration time. Objective: to establish the formulation and evaluation pharmacopeical of the coating for tablets using as base for their elaboration cladodes of *Opuntia* and a system plasticizer-adherent that improve the mechanical and appearance properties than those present in commercial coatings.