Zein is a protein from corn gluten with polymerization characteristics twice more than the necessary to produce linear polymers of polyamid/polyester. Biomaterials from zein are flexible, biodegradable, edible, water resistant, and show selective gas permeability. These properties permit the use of the material in agricultural environment and with a particular importance in the food industry as edible films and food packaging. The water solubility is an important property of biofilms in relation to its use. Some applications require water insolubility to maintain the integrity of the material, others consider that high solubility is necessary. The objective of this work was to produce three types of biofilms: zein/oleic acid, zein/oleic acid added with corn fiber and with banana fiber. The films were produced using the "casting" procedure and, after drying, submitted to the water solubility tests.

All films had to be flexible, transparent and homogeneous. To be analysed.

The film pattern, oleic acid, was what had the lowest water solubility (5.22 ± 1.34%) and higher humidity (5.30 ± 0.13%), differing from the others. The biofilm produced with corn fiber showed the highest solubility (23.19 ± 2.85). Incorporation of fibers biofilms significantly influence the solubility of zein biomaterial.