Microbiological counts and quantification of aflatoxin and fumonisin content in bulk moles marketed without package (3 powdered and 3 paste) sold in public markets in Mexico City. Quintanar Rebollar, M.1, Ruiz Ortiz, M.A.1, Cervantes Olivares, R.A.2, Valdés Martínez, S.E.1 1 Universidad Nacional Autónoma de México, Facultad de Estudios Superiores Cuautitlán, Laboratorio de Tecnología de Calidad; 2 Universidad Nacional Autónoma de México, Facultad de Medicina Veterinaria y Zootecnia

Mole is a traditional Mexican food, there is a wide variety of moles according to the ingredients used in its preparation: yellow, green, poblano, with almonds, etc.. Previous studies in our lab, showed presence of micotoxigenic fungi, as well as micotoxins in dried chillies of different qualities. The aim of the present study was to analyze bulk moles marketed without package: 3 powdered and 3 paste, determining aflatoxin and fumonisin content and microbiological count. Samples were acquired at 4 different public markets in Mexico City in 2 different periods of the year (2011) (48 total samples). Quantification of the toxins was carried out using immunoaffinity columns Aflatest and Fumonitest, using a Vicam IV Fluorimeter for lectures, triplicate determinations were carried out. Microbial count, molds and yeasts determination were done applying Mexican Normativity approved methods. Aflatoxin content in paste moles ranged between 1.0 and 12 ppb, fumonisin content 0.45 to 0.91 ppm; in powdered moles aflatoxin ranged between 1.5 to 18 ppb and 0.35 to 8.3 ppm for fumonisin. Microbiological counts showed that 3 samples were out of normativity in mesophilic aerobic microorganisms, one sample for coliform count and one sample for molds and yeasts. Micotoxin content was out of normativity for all samples, according to the Mexican Specifications Document PC-019-2004, that states 0 ppb for this specification, however, samples comply with international normativity, that allows up to 15 ppb of aflatoxin in food containing chillies. No normativity is suggested nationally or internationally for fumonisin content.