

## Natural occurrence of aflatoxin B1 and aflatoxin M1 in “halva” and its ingredients.

### ABSTRACT

A total 431 samples including halva (56), pistachio (71), almond (63), semolina (69), cardamom (34), raisins (46), halva puri (39) and wheat powder (53) were analyzed using HPLC equipped with fluorescence detector. The results have shown that 32 (57%) samples of halva, 45 (63%) pistachio, 43 (68%) almond, 46 (67%) semolina, 21 (62%) cardamom, 19 (41%) raisins, 21 (54%) halva puri and 22 (42%) of wheat powder samples were found contaminated with AFB1, and 11 (20%), 23 (32%), 34 (54%), 12 (17%), 11 (32%), 7 (15%), 9 (23%) and 11 (21%) samples, respectively were above the European Union permissible limit (2 µg/kg). The results have shown that 20 (59%) samples of halva that contained milk were found contaminated with AFM1 and 3 (9%) samples were found above the recommended limit for AFM1 i.e. 0.05 µg/kg. Limit of detection (LOD) and Limit of quantification (LOQ) for AFB1 and AFM1 were 0.04 µg/kg, 0.12 µg/kg, and 0.004 µg/L, 0.012 µg/L, respectively.

**Keyword:** Aflatoxin B1; Aflatoxin M1; RP-HPLC; Halva; Halva ingredients