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# ANALYSIS OF AFLATOXINS; B1, B2, G1 AND G2 IN SOME RICE SAMPLES OF BANGLADESH

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**Identification and quantification of aflatoxins; B1, B2, G1 and G2 in 20 different rice samples were done by high performance liquid chromatography (HPLC) coupled with fluorescence detector. The rice samples were extracted with aqueous methanol and the extract was purified by immunoaffinity column by following the officially recognized ISO 16050 methods. The method for analysis of aflatoxins in rice sample was validated in terms of selectivity, linearity, sensitivity and recovery. Calibration curves were linear with coefficient of variation r2≥0.9998, 09997, 0.9956 and 0.9969 for B1, B2, G1 and G2, respectively. The limits of detection (LOD) were 0.009, 0.006, 0.039 and 0.025 µg/kg and the limit of quantification (LOQ) were 0.025, 0.018, 0.116 and 0.075 µg/kg for B1, B2, G1 and G2, respectively. Recoveries (n=4) were carried out at two different spiking concentrations (1.39 and 2.77 µg/kg for B1, 0.49 and 0.98 µg/kg for B2, 1.56 and 3.12 µg/kg for G1 and 0.51 and 1.01 µg/kg for G2) and were ranged from 56.71±1.60 to 70.37±5.59 % for B1, 57.71±0.58 to 75.36±6.77 % for B2, 65.53±0.73 to 72.85±5.93 % for G1 and 65.83±2.92 to 99.20±3.16 % for G2, respectively. The total aflatoxins (B1, B2, G1 and G2) in the rice samples were found to be in the range of trace (3.54 µg/kg). Aflatoxin B1, B2, G1 and G2 were present in 70, 60, 40 and 10 % of rice samples, respectively. The results revealed that 18 out of 20 samples contained detectable amount of aflatoxins.**

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