

LIST OF TABLES

No	Title	Page
1.	Monitoring of aflatoxins in 52 raw peanut samples collected from Great Cairo markets.....	70
2.	Number of naturally contaminated samples, mean, minimum, maximum, number of violated and percentages of violation in 52 analyzed raw peanut samples.....	72
3.	Monitoring of aflatoxins in 52 roasted peanut samples collected from Great Cairo markets.....	73
4.	Number of naturally contaminated samples, mean, minimum, maximum, number of violated and percentages of violation in 52 analyzed roasted peanut samples.....	75
5.	Means of contaminants in contaminated commodities...	76
6.	Estimated daily intake (EDI) of aflatoxin B1 adults consuming peanuts.....	77
7.	Serum total protein level of rats fed diets supplemented with raw peanut, roasted peanut, raw peanut naturally contaminated with aflatoxins and roasted peanut naturally contaminated with aflatoxins for six weeks.....	79
8.	Serum albumin level of rats fed diets supplemented with raw peanut, roasted peanut, raw peanut naturally contaminated with aflatoxins and roasted peanut naturally contaminated with aflatoxins for six weeks.....	80
9.	Serum alanine aminotransferase (ALT) activity of rats fed diets supplemented with raw peanut, roasted peanut, raw peanut naturally contaminated with aflatoxins and roasted peanut naturally contaminated with aflatoxins for six weeks.....	82
10.	Serum aspartate aminotransferase (AST) activity of rats fed diets supplemented with raw peanut, roasted peanut, raw peanut naturally contaminated with aflatoxins and roasted peanut naturally contaminated with aflatoxins for six weeks.....	84
11.	Correlations between total protein, albumin, ALT and AST activities, in serum.....	85

LIST OF FIGURES

No	Title	Page
1.	The chemical structures of aflatoxin (B ₁ , B ₂ , G ₁ and G ₂).....	58
2.	Scheme of Experimental Design.....	64
3.	Monitoring of aflatoxins in 52 raw peanut samples collected from Great Cairo markets.....	71
4.	Monitoring of aflatoxins in 52 roasted peanut samples collected from Great Cairo markets.....	73
5.	Serum total protein level of rats fed diets supplemented with raw peanut, roasted peanut, raw peanut naturally contaminated with aflatoxins and roasted peanut naturally contaminated with aflatoxins for six weeks.....	80
6.	Serum albumin level of rats fed diets supplemented with raw peanut, roasted peanut, raw peanut naturally contaminated with aflatoxins and roasted peanut naturally contaminated with aflatoxins for six weeks.....	81
7.	Serum alanine aminotransferase (ALT) activity of rats fed diets supplemented with raw peanut, roasted peanut, raw peanut naturally contaminated with aflatoxins and roasted peanut naturally contaminated with aflatoxins for six weeks.	83
8.	Serum aspartate aminotransferase (AST) activity of rats fed diets supplemented with raw peanut, roasted peanut, raw peanut naturally contaminated with aflatoxins and roasted peanut naturally contaminated with aflatoxins for six weeks.	85
9.	Liver section of rats fed on raw free aflatoxin peanut (Gp.1). Showing dilatation and congestion of central vein (cv) with degenerative change in the surrounding hepatocytes	86
10.	Liver section of rats fed on raw free aflatoxin peanut (Gp. 1). Showing the magnification of (Fig. 9) to identify the degenerated hepatocytes (D).....	87
11.	Liver section of rats fed on raw free aflatoxin peanut (Gp.1). Showing inflammatory cells infiltration and dilated bile duct (bd) in the portal area.....	87
12.	Liver section of rats fed on raw free aflatoxin peanut (Gp.1). Showing the dilatation and congestion of portal vein (pv).....	88
13.	Liver section of rats fed on roasted free aflatoxin peanut (Gp. 2). Showing fatty change in hepatocytes with other	

	degenerations.....	88
14.	Liver section of rats fed on roasted free aflatoxin peanut (Gp. 2). Showing mononuclear leucocytes inflammatory cells infiltration with kupffer cells proliferation in between the degenerated hepatocytes.....	89
15.	Liver section of rats fed on roasted free aflatoxin peanut (Gp. 2). Showing focal mononuclear leucocytes inflammatory cells aggregations (M) in between the degenerated and necrosed (D) hepatocytes.....	89
16.	Liver section of rats fed on roasted free aflatoxin peanut (Gp. 2). Showing severs congestion in the central vein (cv).....	90
17.	Liver section of rats fed on roasted free aflatoxin peanut (Gp. 2). Showing severs dilatation of portal vein (pv).....	90
18.	Liver section of rats fed on roasted free aflatoxin peanut(Gp. 2).Showing inflammatory cells infiltration in periductal tissue surrounding the bile duct (M).....	90
19.	Liver section of rats fed on raw peanut naturally contaminated with aflatoxins (Gp. 3). Showing different degenerative changes (granules degeneration, vacuolar degeneration and fatty change) in the hepatocytes (D)	91
20.	Liver section of rats fed on raw peanut naturally contaminated with aflatoxins (Gp. 3). Showing inflammatory cells infiltration and fibrosis arising from the portal area to other making a triangle	91
21.	Liver section of rats fed on raw peanut naturally contaminated with aflatoxins. (Gp. 3). Showing magnification of (Fig. 20) to identify the triangular inflammatory reaction and diffuse kupffer cells proliferation in between the hepatocytes (k).....	92
22.	Liver section of rats fed on raw peanut naturally contaminated with aflatoxins (Gp. 3). Showing severs dilatation and congestion in central veins (cv) and portal veins (pv).....	92
23.	Liver section of rats fed on raw peanut naturally contaminated with aflatoxins (Gp. 3). Showing inflammatory cells infiltration in the periductal tissue surrounding the bile duct (bd) in portal area.....	93

24.	Liver section of rats fed on roasted peanut naturally contaminated with aflatoxins (Gp. 4). Showing granular and vacuolar degenerations and fatty changes in the hepatocytes with diffuse kupffer cells proliferation in between.....	94
25.	Liver section of rats fed on roasted peanut naturally contaminated with aflatoxins (gp. 4). Showing severs dilatation of central vein (cv) with focal inflammatory cells infiltration (M) in the hepatic parenchyma.....	94
26.	Liver section of rats fed on roasted peanut naturally contaminated with aflatoxins (Gp. 4). Showing severs dilatation of portal vein (pv) with periductal inflammatory cells infiltration and fibroblastic cells proliferation surrounding the bile duct (bd) in portal area.....	95
27.	Liver section of rats fed on roasted peanut naturally contaminated with aflatoxins (Gp. 4). Showing mononuclear leucocytes inflammatory cells infiltration in the portal area.....	95
28.	Liver section of rats fed on roasted peanut naturally contaminated with aflatoxins (Gp. 4). Showing cytomegaly and karyomegaly in the hepatocytes (arrows) with inflammatory cells infiltration (M) and kupffer cells proliferation (k) in between.....	96
29.	Liver section of rats fed on roasted peanut naturally contaminated with aflatoxins (Gp. 4). Showing multinucleated giant cells formation.....	96
30.	Liver section of rats fed on roasted peanut naturally contaminated with aflatoxins (gp. 4). Showing necrosis in individual hepatocytes (N).....	97
31	Liver section of rats fed on roasted peanut naturally contaminated with aflatoxins (gp. 4). Showing dilatation and congestion with extravasated red blood Cells in the sinusoids in between the degenerated hepatocytes.....	97