

- Document Type** : Thesis
- Document Title** : *The Effect of Polyethylene on the Kidney tissues in Mice*
تأثير البولي إيثيلين على أنسجة الكلى في الفئران البيضاء
- Document Language** : Arabic
- Abstract** : The present study is interested in studying the effect of storing hot foods in polyethylene (PE) plastic pags to with butylated hydroxytolun (BHT) is added on Kidney functions and structure in white mice. The toxicity (LD50) for both PE and BHT was tested by feeding animals daily increasing doses (0.5, 1, 1.5, 2, 2.5, 3, 3.5 gm) for seven days for PE and (400 – 650 – 780 – 850 mg / kgm for BHT). The results showed no deaths in the PE group, while the LD50 for BHT was 650 mg/kgm, and on according by the dose used for this study was calculated. Animals were divided into 5 groups: control fed corn oil, PE fed group (4gm / kgm food), BHT group (400 mg / kgm) dissolved in 1.5 ml corn oil and BHT + PE group (400mg / kgm + 4gm / kgm food). The last is the group fed by the food heated to 100co and stored in polyethylene bags. The experiment period was 42 days, during which animals showed behaviour changes in the form of loss of appetite, and becoming more aggressive. Animals fed BHT appeared confused with unbalanced gait, and developed loss of conscious for 20 - 40 seconds, coming back after water spray. The treatments affect both animal and Kidney weights, where significant decrease was observed in experimental animals. Biochemical and histological studies proved degenerative changes in renal corpuscles and Kidney tubules that confirm biochemical increase in urea, and creatinine in the serum of treated animals. Histological changes include vascular congestion, renal corpuscle, and glomerulur atrophy, beside necrotic changes in kidney tubules, that most of them are blocked by protenin casts. Blood vessels (arcuate artery) showed necrotic changes in structural compents of arterial wall. These changes explained biochemical analysis.
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