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Co5.**DETERMINATION OF THE EQUATION OF THE DISSIPATION CURVE OF IMAZALIL IN LEMON THROUGH EMPIRICAL MODELS**

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The pesticide imazalil is used in lemon production during the postharvest stage to combat fungi of different genera. Toxicological tests with imazalil carried out in animals showed symptoms such as lack of muscle coordination, shaking, dermatitis and vomiting. The maximum limit value of residues of imazalil in lemon established by the Codex Alimentarius is 5 mg/kg, which is the one used in Argentina. In this work we experimentally determined the dissipation curve of imazalil in lemon from the Province of Tucumán in simulated conditions of transportation, and evaluated empirical mathematical models to determine the equation of the dissipation curve. Imazalil was applied during the packing process. The simulation of the transportation conditions was carried out by keeping the sample for 2 days at room temperature and then in a cold storage chamber. Samples were taken at 0,1,2,7,14,21,28 and 35 days after application and analyzed by HPLC. The empirical mathematical model that presented a better fit was the model of square root of second order, with a correlation coefficient equal to 0.86. The mean dissipation time calculated was 97 days. The fruits showed an imazalil concentration that did not exceed the maximum limit established for Argentina as well as by the Codex Alimentarius.

Co6.**ANTIOXIDANT AND HAEMOLYTIC ACTIVITIES OF *Senecio* SPECIES USED IN TRADITIONAL MEDICINE**

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Senecio nutans Sch. Bip., *Senecio spagazzinii* Cabrera and *Senecio viridis* Phil. var. *viridis* are native species used in traditional medicine in northwestern Argentina. The aerial parts of these herbs are usually used as infusion or decoction. In the present work, the total phenolic, flavonoids and caffeoylquinic acids contents, radical scavenging (DPPH[•]), antioxidant (β -carotene / linoleic acid bleaching method) and haemolytic activities of infusions and decoctions of the three species above were determined. Both the decoction and the infusion of *S. nutans* exhibited the highest content of phenolic compounds, respectively: 25.2 and 20.5 mg of gallic acid equivalents (GAE) per gram of plant material (gpm); flavonoids: 7.1 and 8.7 mg of quercetin equivalents (QE)/gpm and caffeoylquinic acids: 18.6 and 15.9 mg of chlorogenic acid equivalents (CAE)/gpm. They also showed a higher radical scavenging activity than *S. viridis* var. *viridis* and *S. spagazzinii*. The three species were very effective as antioxidants in the β -carotene bleaching assay with inhibition percentages above 65% at 47 ppm (BHT produced 94% inhibition at 47 ppm). The extracts did not show haemolytic activity on human and rabbit erythrocytes.

Co7.**EVALUATION OF THE ANTI-INFLAMMATORY ACTIVITY OF A CATALASE PRODUCING STRAIN OF *Lactobacillus casei* IN A TNBS INDUCED COLITIS MURINE MODEL**

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Reactive oxygen species (ROS) concentrations are abnormally elevated during inflammatory processes. The local delivery of antioxidant enzymes such as catalase (Cat), using Lactic Acid Bacteria (LAB) could decrease ROS levels in the gut and be used in the treatment of certain inflammatory bowel diseases (IBD). The anti-inflammatory activity of a Cat producing strain of *Lactobacillus (Lb.) casei* BL23 was tested in an experimental IBD model. This genetically modified strain contained the Cat gene (*mnKat*) of *Lb. plantarum* ATCC 14431 cloned in the expression vector pLEM415. Mice received this strain or the native Cat- strain for 24 days. IBD was induced by intrarectal TNBS inoculation after 10 days of LAB supplementation and body weight, liver microbial translocation, gut histology, Cat activity, IFN γ and IL-10 levels were evaluated. Mice that received the Cat+ strain showed faster weight gains, lower liver microbial translocation, lower extent of gut inflammation and increased Cat activity in the gut. IFN γ and IL-10 concentrations were not increased in these animals, demonstrating that the anti-inflammatory response of the Cat+ strain was not due to an immune regulatory mechanism. The Cat producing LAB was effective in the prevention of a chemically induced IBD due to its antioxidant activity.

Co8.**ARTERIAL HYPERTENSION INCREASES INSULIN VALUES AND ALTERS HOMA INDEX IN NON DIABETIC PATIENTS**

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Diabetes mellitus increases the risk of cardiovascular morbimortality. Arterial hypertension (ATH) would alter hormonal control. We observed an association between ATH and fasting and postprandial glucose and insulin increase. Few studies evaluate ATH as a risk factor for diabetes. **Objectives:** To investigate alterations in the glucidic metabolism in a hypertensive non diabetic population by assessing basal glycemia, insulin and HOMA index. **Materials:** We worked with 129 non diabetic non smoking patients (111 women, 18 males) divided into two groups: hypertensive n: 56 and non hypertensive n: 73, age 36.1 \pm 1.2 years. We determined height (m), weight (K), waist circumference (WC, cm), glucose (mg/dl) and insulin (uU/ml), body mass index and HOMA index (glucose x insulin/405). Student's t-test. **Results:** The ATH groups presented values similar to the non ATH group: BMI (35.8 \pm 1.6 vs 34.5 \pm 1.0 pNS), WC in women (109.1 \pm 1.9 n:45 vs 108.9 \pm 1.8 n:54 pNS). Glucose and insulin were normal in both, but higher in the ATH group (glucose 86.7 \pm 3.6 mg/dl vs 71.6 \pm 1.0 p<0.001 and insulin 18.3 \pm 2.7 vs 12.6 \pm 0.9 p< 0.05). HOMA index was altered in the hypertensive group (ATH: 4.3 \pm 0.8 vs no ATH:2.4 \pm 0.2 p<0.01). **Conclusions:** There would be an altered glucose state in ATH patients. Although insulin and glucose values were within reference levels, they were increased with respect to normotensives. HOMA index indicated insulin-resistance in ATH. It would be important to evaluate glucose control mechanisms in ATH patients in order to prevent diabetes.