

145.

PHYTOCHEMICAL AND BIOLOGICAL CHARACTERIZATION OF PHYTOTHERAPEUTIC PREPARATIONS OF ACACIA SPECIES*Zampini I^{1,2,4,6}, Danert C⁶, Cuello S^{5,6}, Arias M³, Isla M^{1,2,4,6}**¹Cát. Qca Orgánica, y Biológica (Fac. Ciencias Naturales), ²Cát. Fitoquímica and ³Cát. Farmacotécnica II (Fac. Bioq, Qca y Fcia), ⁴CONICET, ⁵ANPCyT. UNT. ⁶Fundación Miguel Lillo. Tucumán. Argentina. E-mail: misla@fbqf.unt.edu.ar*

Although the *Acacia* genus (Fabaceae) is represented by more than 1350 species distributed worldwide, there are few reports on the chemical composition and biological properties of Argentinean *Acacia* species. The presence of different flavonoids in the leaves and stems has been reported. *Acacia aroma* is the most widely studied species in this genus. Antioxidant, anti-inflammatory and antimicrobial activity against multi-resistant human pathogenic bacteria have been reported for *A. aroma*.

In this work we present the study of the phytochemical and biological (antioxidant and antibacterial activity) screening from four Argentinean *Acacia* species extracts (*Acacia aroma*, *Acacia caven*, *Acacia visco*, *Acacia praecox*).

Phytochemical screening showed similar chemical patterns by TLC for *A. aroma* and *A. visco*. The presence of alkaloids was discarded. TLC-autography (DPPH/ABTS) and bioautography assay against *Staphylococcus aureus* methicillin-resistant were performed. Antioxidant and antibacterial activities were demonstrated in all preparations.

146.

NUTRITIONAL AND FUNCTIONAL PROPERTIES OF REGIONAL FRUITS*Cardozo ML², Ordoñez RM^{1,2}, Isla MI^{1,2}.**¹Cátedra Fitoquímica. ²CONICET. Facultad de Bioquímica, Química y Farmacia. Universidad Nacional de Tucumán. Tucumán. Argentina. E-mail: misla@fbqf.unt.edu.ar*

Consumption of fruits and vegetables helps prevent numerous chronic diseases. This property might be caused by antioxidant phytochemicals present in their composition. The specific aim of this study was to determine the nutritional and functional properties of fruit ethanolic and aqueous extracts of four plant species that grow in northwestern Argentina. This study shows that all fruits analyzed accumulate glucose and fructose. *Zizyphus mistol* aqueous extracts exhibit the highest amounts of soluble proteins (133 mg/g) and total phenolic compounds (27.42 mg/g) followed by *Cereus forbesii*, *Morus nigra* and *Cyphomandra betacea*. The DPPH scavenging ability of all fruit extracts was higher than that of synthetic antioxidants. Another antioxidant activity screening method applicable to both lipophilic and hydrophilic antioxidants, ABTS²⁺ (ABTS radical cation) assay, showed results similar to those obtained with DPPH. The aqueous extract of *Z. mistol* scavenged both radicals at a weak rate (50%) at 53 µg/mL while the SC₅₀ values for the other extracts ranged between 5 and 8 µg/mL.

147.

ANTIMICROBIAL SENSITIVITY IN SALMONELLA STRAINS ISOLATED FROM POULTRY FOOD INGREDIENTS*Soria MA, Bueno DJ, Trinidad JA.**INTA Estación Experimental Agropecuaria Concepción del Uruguay, CC N° 6, 3260, Entre Ríos, Argentina. E-mail: msoria_1@yahoo.com.ar*

Food is considered the most important source of Salmonella introduction in poultry farms. Antimicrobial agents are normally used to control these bacteria. The aim of this study was to determine antimicrobial sensitivity in Salmonella strains isolated from poultry food ingredients. Salmonella strains showed different antimicrobial susceptibility. Seventeen were sensitive to all antibiotics studied while the other 16 strains were intermediate to 1 or 2 antimicrobial agents. There was 100% sensitivity to gentamycin (120 µg), streptomycin and norfloxacin. With respect to other antibiotics tested, 91 to 97% of the strains were susceptible, except for amikacyn, where 70% of strains were susceptible, with 27% of intermediate strains. There were not multiresistant Salmonella strains. Therefore, antimicrobial resistance was not a problem in Salmonella strains isolated from poultry food ingredients. Before using amikacyn to control these bacteria, antimicrobial susceptibility testing should be emphasized.

148.

PHYSICAL, CHEMICAL AND MICROBIOLOGICAL ANALYSES OF HONEY FROM EXTRACTION FACILITIES WITH DIFFERENT TECHNOLOGICAL LEVELS*Mouteira MC, Soria ME, Malacalza NH.**Fac. Cs. Agr. y Ftiles, UNLP y Direc. Prov. de Gan., MAA. C.C. N° 19. La Plata. E-mail: mouteiracecilia@yahoo.com.ar*

Handling, machinery and environmental conditions alter the physical, chemical and microbiologic quality of honey. This study examines the way in which different levels of technology affect the extraction process. Facility "A" was equipped with frame, electric knife, bateau and drum; Facility "B" with frame, steam powered knife, bateau, well and drum. Tests followed IRAM specifications. Mean values for fungus and yeast, total coli, colour, humidity and HMF were: Facility A: Frame 36.67, <0.3, 30.9, 17.87 and 5.44; electric knife: 73.0, <0.3, 24.50, 16.75 and 9.89; bateau 143, <0.3, 25.87, 17.58 and 3.88; drum 19.67, <0.30, 23.33, 17.65 and 2.57. Facility B: frame 29.75, <0.30, 23.34, 26.64 and 2.62; steam powered knife 90, 29, 22.68, 15.9, 3.38; bateau 33.33, 10.74, 29.23, 16.07 and 3.64; well 79.67, 9.91, 30.34, 16.39, 2.89; and drum 47.13, 19.87, 24.67, 16.29, 2.87, respectively. *Salmonella spp* was not present in any of the samples. The increase in fungus-yeast (facilities A and B) and total coliforms (facility B) indicates poor hygienic-sanitarian management of the product. The physical and chemical analyses for both facilities are within AFC values.