

BIBLIOGRAFIA LATINOAMERICANA

ARGENTINA:

Effect of maternal dietary amino acid pattern on rat offspring-

M. L. Portela, M.E. Rio, and J.C. Sanahuja. (Department of Nutrition and Food Science, School of Pharmacy and Biochemistry, University of Buenos Aires, Junin 956, Buenos Aires 1113, Argentina). *Am. J. Clin. Nutr.* 30: 191-197, 1977.

The effect of lifetime feeding to gravid rats of diets containing different indispensable amino acid patterns on body and brain composition of the offspring was studied. Two groups of rats were fed, from weaning to delivery, either experimental diet B or diet I. Both diets contained the same amount of total nitrogen (3.14%), available lysine (0.4%) and "complete protein to total protein ratio" (22.5%), but whereas diet I provided an excess of indispensable amino acids over the amount of limiting amino acid, diet B supplied all of the indispensable amino acids in marginal amounts and in a rather well balanced pattern. The nitrogen content of diet B was matched to the nitrogen content of diet I by addition of a mixture of dispensable amino acids. A control group fed stock diet (C) was run simultaneously. Birth body weight, carcass nitrogen to water ratio, and brain weight of pups were significantly lower in B than in I. The figures for I were not significantly different from the controls. Brain DNA content in B was significantly lower than in C, but in I it was lower than for both B and C. Nitrogen to water ratio and brain DNA content of group B

were low when compared to the standard curves for our colony; however, DNA content was normal for the degree of body development. On the other hand, in group I brain DNA was preferentially affected, as if body and brain maturity were dissociated.

23 Ref.

BRASIL:

Caracterização do óleo de Lupinus

Mutabilis sweet ou "Tarhui": Gerson Pereira Pinto, Sebastião Irineu da Costa, Iovaldo Bueno Figueiredo, Claudio Vera Loza. *Coletânea do Inst. de Tecn. de Alimentos, Campinas, Brasil*; 7: 233-239, 1976.

Lupinus mutabilis Sweet was obtained from the area of Huatajata, in the Bolivia highlands where it is known as Tarhui. The physical and chemical characteristics of its oil were examined.

This was shown to have about 2.8% of phosphatides, composed mainly of lecithin, which was responsible for its high viscosity. These phosphatides can be removed easily from the crude oil by refining. The Tarhui oil had a fatty acid composition similar to that of peanut and corn oil. The absence of hydroxyl groups in its fatty acids suggests that this oil could be used as edible oil if properly refined.

5 Ref.

Armazenamento de feijão de mesa em escala industrial, a granel, em silo ventilado artificialmente:
Braz Antonio Jordão, Geraldo R.

Carvalho, Maria Regina Sartori, Eidiomar Angelucci, Mauro F. de Freitas Leitão, Sebastião Irineu da Costa, Emília Emico Miya. *Coletânea de Inst. de Tecn. de Alimentos, Campinas, Brasil, 7: 265-298, 1976.*

The preservation of grain quality as a food, depends on its moisture content, temperature and storage time. In any case or type of storage of non processed food grains, good aeration always contributes to the product's preservation.

The experiment showed, that in the average climatic conditions of 24° C and 63% RH (relative humidity), even after a long period of time, the use of well-handled mechanical aeration resulted in the preservation of stored beans for about a year.

The aeration, in this experiment, was only done when ambient air temperatures were less than 18° C and around or lower than 70% RH.

Under the mentioned conditions the product was preserved for a year at nearly 12% of moisture and maintained reasonable conditions for consumption.

The percentage of broken grains was reduced by building steps covered with rubber, from the top to the bottom of the small silo. This method of avoiding mechanical damage by the use of steps should be examined for very high silos.

14 Ref.

Processamento da polpa asséptica de goiaba. Kenzo Kato, Zeno José de Martin, Eduardo A.G. Salomón, Ernesto W. Bleinroth, Vera Lúcia P. Ferreira, Emília Emico Miya, Mirtha Nelly Uboldi Eiroa. *Coletânea do Inst. de Tecn. de Alimentos, Campinas, Brasil, 7: 299-317, 1976.*

The main objectives of this study was to establish the conditions for canning guava puree with Dole aseptic unit (model 1210-L) and compare the product with those obtained by hot-filling and freezing by using physical, chemical, microbiological and sensorial evaluation.

Fully ripened guavas of "a red variety" were selected, desintegrated and pulped as described by DE MARTIN et al. The use of high temperature, near to 140° C (284° F), caused significant losses in quality of guava puree as they do with banana puree.

Improvement in product quality was obtained using a lower sterilization temperature in the aseptic unit (115° C or 239° F for 30 seconds). These heat treatment conditions gave the necessary microbiological stability to guava puree in their natural pH of 4.0.

Shelf life studies were carried out for 180 days at room temperature and involved physical, chemical, microbiological and sensorial evaluation. Sensorial analysis demonstrated the higher quality aseptic guava puree mainly when compared with the hot-filled guava puree, and as good as frozen product.

18 Ref.

Estudo de polpa concentrada de algumas variedades comuns de manga. Kenzo Kato, Zeno J. De Martin, Ernesto W. Bleinroth, Emília Emico Miya, Sônia Dedeca da Silva, Eidiomar Angelucci. *Coletânea do Inst. de Tecn. de Alimentos, Campinas, Brasil, 7: 319-342, 1976.*

The main objective of this work was to develop a method obtaining concentrated mango pulp. The stability of chemical, physical, sensorial and microbiological characteristics of the product was followed during storage.

Five mango varieties, Espada, Bourbon, Haden, São Quirino and Non Plus Ultra were studied. All were harvested at a mature-green stage and ripened under controlled conditions in maturation rooms.

Satisfactory yields of mango pulp was obtained in a paddle type pulper and then concentrated in a Tito Manzini evaporator. The concentration was increased to 30° Brix.

The pulp concentrate was canned in n° 2 1/2 lacquered cans by a hot-filling process. Pasteurization was made in a

swept surface heat exchanger.

Samples were tested at intervals up to 180 days of storage at room temperature. Chemical, physical, sensorial and microbiological analysis showed satisfactory stability. All varieties were considered to be of very good flavour and no significant difference was found in their quality when reconstituted and tested as nectar.

The results led to conclusion that these five mango varieties could be used to make mango pulp concentrate industrially.
21 Ref.

Conservação de limões das variedades Taiti e Siciliano pelo frio e com ácido giberélico.-Ernesto W. Bleinroth, Harald A. Hansen, Vera Lúcia P. Ferreira, Eidiomar Angelucci. Coletânea do Inst. de Tecn. de Alimentos, Campinas, Brasil, 7: 343-370, 1976.

Improving the distribution of lemons on the consumer market, would avoid the large losses which occur during the harvest period when the price is too low to compensate selling, and also avoid the excessively high prices which occur between harvests.

Hence the effect of low temperature storage was examined on 2 varieties, using temperatures of 1° C and 6° C.

Above 7° C, Tahiti lemons lost their colour within 4 weeks. However, they stored well for up to 2 months at 6° C.

With the Sicilian variety there were no problems at the lower temperature and so the lemons could be stored for 2 months at 1° C.

It was found that an atmosphere containing low concentrations of CO₂ (0,5-3%), partially controlled the yellowing of the lemons. However, if the CO₂ level was raised to 10%, and the storage temperature held at 10-15°C, then the lemons spoiled after 3 weeks storage, even when treated with fungicide (Benlate 0,2%)

The use of 2-3% O₂, and a storage temperature of 5°C, retarded the loss of green colour for 3 weeks.

In order to control the loss of green

colour, chemicals such as KMnO₄, KOH and gibberellic acid (GA₃) were tried, using a controlled atmosphere. Both KMnO₄ and KOH showed only small effect in controlling the loss of green colour at 15°C.

At a storage temperature of 7°C, Tahiti lemons retained their green colour for 4 months, and Sicilian lemons for 2 months when treated with 100ppm of gibberellic acid.

16 Ref.

Estudos Comparativos entre os Palmitos de sabor doce (palmito-jucara- Euterpe edulis Mart. e açaf Euterpe oleracea Mart.) E de sabor amargo (guariroba- Syagrus oleracea Becc.) II- Compostos fenólicos.-Marilena Uzelac, Massami Shimokomaki, Carim Abdala, Josefina Faria Franca. Coletânea do Inst. de Tecn. de Alimentos, Campinas, Brasil, 7: 371 - 383, 1976.

The relationship between bitter taste and phenolic compounds was studied in three species of hearts of palm, since each has a different taste.

A chemical and biochemical analysis of the semi-purified extract showed that the phenolic compounds were probably one of the factors responsible for the bitter taste of the guariroba heart of palm (*Syagrus oleracea*, Becc.).

Chromatographic and spectrophotometric studies were carried out in order to determine the qualitative differences in the profile of the phenolic compounds in the samples studied. Evidence was obtained indicating the presence of phenolic glycosides.

9 Ref.

Comparação Físico-Químico-Organoléptica do Palmito enlatado de três espécies de palmeira: Vera Lúcia P. Ferreira, Emília Emico Miya, Issao Shirose, Condorcet Aranha, Eldo Antonio M. da Silva, Matthew E. Highlands (Secção de Botânica do Instituto Agrônômico do Estado de São

Paulo). Coletânea do Inst. de Tecn. de Alimentos, Campinas, Brasil, 7: 389 - 416, 1976.

Comparative studies of sensory, physical and chemical characteristics of canned hearts of palm-prepared from *Euterpe edulis* Mart. (jucara), *Euterpe oleracea* Mart. (açail) and *Syagrus oleracea* Becc. (guariroba) were made.

The products were examined at the end of 1,3 and 6 months storage after processing.

A standard of identity for canned hearts of palm is presented.

A list of defects which commonly occur in the processed product was prepared.

It is believed that the major defects in quality could be eliminated through control of the processing operation.

The flavor of *Syagrus oleracea* Becc, after processing was judged to be unsatisfactory.

18 Ref.

Conservação das variedades de batatinhas mais comercializadas no Brasil.-José L.M. Garcia, Ernesto W. Bleinroth, Nabin K. Sabbagh, Issao Shirose. Coletânea do Inst. de Tecn. de Alimentos, Campinas, Brasil, 7: 417-437, 1976.

The storage potential of the most widely marketed potato varieties of the Brasil, was studied.

The varieties were subjected to a physical characterization, and the weight loss, chemical changes and keeping quality determined during storage, both at room temperature and under refrigeration.

The Bintje, Radosa and Marijke varieties, harvested in the dry season, showed good keeping quality under refrigeration (5°C) at high relative humidity (90-95%) and can be stored under these conditions for 180 days.

The physical characterization of the varieties showed considerable variation within and between the varieties and types.

A considerable weight loss was shown by the varieties stored at room tempera-

ture (25°C), even though the storage time was short. However, under refrigerated storage the weight loss was small.

Sprouting and storage decay were intense for those samples held at room temperature, and potatoes could not be stored under these conditions for more than 40 days. Under refrigeration, sprouting only occurred at the end of the rest period, which is about 180 days.

Under refrigerated storage, a marked increase in the total and reducing sugars content of the tubers was found, whereas at room temperature, relatively slight increases were obtained. However, with the Radosa and Marijke varieties, it was possible to reduce the sugar level of the refrigerated tubers, by gradually raising the storage temperature at the end of the storage period.

31 Ref.

Staphylococcus aureus enteropatógeno em Macarrão.-Ivone Delazari, Maure F.F. Leitão. Coletânea do Inst. de Tecn. de Alimentos, Campinas, Brasil, 7: 485-497, 1976.

Samples of commercially produced pasta were analysed for their degree of contamination by *Staphylococcus aureus*.

It was found that of the 120 samples examined, 89 (69,5%) contained *S. aureus* at a level between 10^1 to $> 10^4$ /g. Pasta containing whole egg were found to be more contaminated than pasta without whole egg, even though the bacterium was frequently found in these samples.

Two methods were used in the examination: the MPN method with enrichment in Triptic Soy broth plus 10% NaCl, and the direct plating method. The later, gave higher counts than the enrichment method.

A total of 327 cultures of *Staphylococcus aureus* were isolated and tested for the coagulase and thermostable deoxyribonuclease. The correlation between them were 89,9%.

Positive cultures in both tests were examined for enterotoxin production. Enterotoxins A, B, C, D and E were identified.

51 Ref.

Captação de ferro radiotivo no terço proximal do intestino delgado de ratos desnutridos. - Joao Antônio Granzotti, Nassim Iazigi, Arthur L. Gonçalves, Luiz G. Faggioni.- (Setor de Pediatria da Faculdade de Medicina de Ribeirão Preto. Universidade de Sao Paulo - U.R.S.) Arq. Gastroent. S. Paulo. 13: 247-251, 1976.

Estudou-se a variação da captação de ⁵⁹Fe pelo terço proximal do intestino delgado após a administração intragástrica de radióisótopo em ratos normais e desnutridos.

A análise da morfologia das duas curvas de captação de ⁵⁹Fe mostrou que elas são bimodais. As flutuações observadas na curva de captação de ferro foram interpretadas como sendo decorrências da saturação e desaturação de carregadores intracelulares.

A comparação sob o ponto de vista quantitativo das curvas obtidas mostrou que em valores absolutos, a captação de ⁵⁹Fe é superior nos animais normais. Quando a captação é expressa em relação à unidade de massa de tecido úmido, os ratos desnutridos apresentam valores superiores aos animais normais.

Estes achados evidenciam que as células da mucosa intestinal, guardam a capacidade de reter o ferro que oferecido à mucosa é desnecessário ao organismo.

18 Ref.

Pesquisa sobre as causas de desistência do tratamento no ambulatório de obesidade.— Livia Ludmila Liepin, Maria Da Glória Ribeiro da Silva.- (IEDE, Suseme-GB, Brasil). R. Méd. Estado RJ, 42: 211-213, 1975.

Bócio difuso atóxico produzido por tratamento com lítio. Tiroidite Crônica de Hashimoto.— José Schermann, Nilton Cesar da Silva.- (Clinica Médica da UFRJ, Rio de Janeiro, Brasil). R. Med. Estado/RJ, 42: 183-186, 1975.

A non-toxic diffuse goitre is showed

up in a patient after two years of continuous use of lithium for a depressive state. Hormonal studies disclosed a low thyroid reserve, which was proved by the level of plasmatic TSH and the lack of response the thyroid to exogenous TSH.

Triiodothyronine in suppressive doses brought the prompt regression of the goitre, but it relapsed when the drug was stopped. Needle biopsy of the thyroid disclosed the characteristics lesions of Hashimoto's thyroiditis. Resumption of hormonal treatment made the goitre again disappear.

In their conclusions, the authors stress the need for a close follow-up of patients on lithium therapy by an endocrinologist, including examination before starting therapy and periodic control throughout the whole treatment.

COLOMBIA

Encuesta Socio-económica Nutricional y Antropológica en dos municipios cercanos a la Costa Atlántica de Colombia.—J. Camacho Gamba, Alicia Lema de Aldana, Carlos Arrazola, Harold Avila, Alvaro Bustos Berrocal, Jorge Suescun, Harlen Uribe, Francisco Villadiego. (Escuela de Medicina Juan M. Corpas-Colombia.) Rev. Colombiana de Pediatría, 30: 19-45.

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5 Ref.

VENEZUELA;

Iron absorption by humans from hemosiderin and ferritin, further studies.-Martínez Torres C; Renzi, M; Layrisse, M. (Inst. Venezolano de Investigaciones Científicas, Apartado 1827, Caracas, Venezuela). *Journal of Nutrition* 106, 128-135, 1976.

Haemosiderin and ferritin biosynthetically labelled with Fe or ^{55}Fe were given to 18 men and 43 women from rural areas in Venezuela who were in good health except for a few who had Fe-deficiency anaemia. The geometrical mean Fe absorption from haemosiderin in both normal and anaemic subjects was

3.4%. Mean absorption ranged from 1.9% in normal subjects to 4.7% in those with moderate Fe deficiency and 7.3% in those with more severe deficiency. Fe absorption from haemosiderin was significantly increased when it was given with ascorbic acid or with veal liver. Absorption of Fe from haemosiderin when haemosiderin and wheat in the form of pancakes were taken in a meal was less than absorption from wheat. Fe from liver ferritin and liver haemosiderin was less absorbed than Fe from whole liver in which haemoglobin Fe was also present. The results support the possibility that ferritin and haemosiderin form a pool different from the nonhaem pool formed by plant Fe, egg Fe and ferrous salts.