Acerola - Malpighia Glabra

Princípio Ativo: Rica em vitamina C.

Uso Popular:

- Anti oxidante (1)
- Prevenção e tratamento do câncer (2)
- Rica em vit C (3-4)
- Anti fungica (5)

Bibliografia:

1. Inhibition of LPS-stimulated NO production in mouse macrophage-like cells by Barbados cherry, a fruit of Malpighia emarginata DC.
   Faculty of Science, Josai University, Sakado, Saitama 350-0295, Japan.

   The extract of Barbados cherry (acerola fruit), a fruit of Malpighia emarginata DC., has been reported to display diverse biological activities such as prevention of age-related diseases. We investigated here the possible effect of Barbados cherry extract on nitric oxide (NO) production by activated macrophages. Barbados cherry was roughly separated into 4 or 5 fractions by two different methods, using various organic solvents such as hexane, acetone, methanol (70% and 100%) and water, and assayed for its ability to inhibit NO production by lipopolysaccharide (LPS)-stimulated mouse macrophage-like Raw 264.7 cells. Among these fractions, AcOEt extracts (AE0) in Method I and acetone extract (A0) in Method II showed the highest inhibitory activity of NO production (SI > 20 and SI = 31, respectively). When these fractions were subjected to silica gel column chromatography, higher inhibitory activity for NO production was concentrated in AcOEt (AE6) (SI = 64) and benzene-AcOEt (1:4) (A10) fractions (SI > 59). Western blot analysis demonstrated that AE6 and A10 fractions reduced the intracellular concentration of inducible NO synthase (iNOS) by approximately one-third. ESR spectroscopy showed that these fractions scavenged various radical species such as superoxide anion (O2-) and NO radicals. These data suggest that the inhibitory effect on NO production by Barbados cherry extracts is partly due to the inhibition of iNOS expression, and scavenging of O2- and NO radicals.

2. Effect of acerola cherry extract on cell proliferation and activation of ras signal pathway at the promotion stage of
lung tumorigenesis in mice.
Department of Agriculture and Biological Chemistry, College of Bioresource Sciences, Nihon University, Fujisawa, Kanagawa, Japan.

The present study was undertaken to estimate the effect of acerola cherry extract (ACE) pretreatment on cell proliferation and the activation of Ras signal pathway at a promotion stage of lung tumorigenesis in mice treated with 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK). Pretreatment with ACE (dose, 70mg/kg body weight and 700 mg/kg body weight) inhibited increases in the levels of proliferating nuclear cell antigen and ornithine decarboxylase at the promotion stage. This treatment of ACE also suppressed the activation of Ras signal pathway at the same stage. These results suggest that ACE regulates abnormal cell growth at the promotion stage of lung tumorigenesis in mice treated with NNK as a result of suppression of the initiation stage.

3. Vitamin C in Barbados cherry Malpighia glabra L. pulp submitted to processing and to different forms of storage.
Visentainer JV, Vieira OA, Matsushita M, de Souza NE.
Departamento de Quimica-Universidade Estadual de Maringa, Brasil.

Ripe fruits of Barbados cherry Malpighia glabra L. proceeding from the fruit-growing section of Iguatemi Experimental Farm of Universidade Estadual de Maringa (PR), were triturated in a liquefier and hulled in a stainless steel sieve with 25 mesh. The bagasse (seeds and hull) was discarded and the vitamin C content was immediately determined, which was 1.79 g by 100 g of pulp. After that, the integral pulp was packed in glass flasks and submitted to the exhaustion and pasteurization processes and then hermetically closed. After the heat treatment the vitamin C content was 1.54 g by 100 g of pulp. The sealed flasks of Barbados cherry pulp, with and without the aluminum foil protection, were stored for 40 days. The first portion was kept at room temperature, the second in a refrigerator (1 degree C), and the third in a freezer (-18 degrees C). The vitamin C content analysis were realized on the 5th, 10th, 15th, 20th, 30th and 40th day. For the flasks stored without the aluminum foil protection, there was a loss of 22.08%, 7.79% and 1.30% and with aluminum foil the loss was of 10.40%, 3.90% and 1.30% for the storage at room, refrigeration and freezing temperatures, respectively. The results show that freezing method is the best form of vitamin C preservation.

4. [Physico-chemical characterization of acerola (Malpighia glabra L.) produced in Maringa, Parana State, Brazil] [Article in Portuguese]
Visentainer JV, Vieira OA, Matsushita M, de Souza NE.
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The acerola Malpighia glabra L., originally from the Antillas and North of South America, known by the people as cereja-das-antilhas or cereja-do-para distinguish itself by its high content of vitamin C. The ripe and fresh acerola fruits utilized in
experiments, were obtained from farmers of Maringa region, Paraná State, Brazil. The fruits were hulled in steel sieve with 25 mesh and the bagasse (seeds and hull) discarded. These physico-chemical analysis were realized in the pulp: vitamin C, moisture, protein, carbohydrate, fiber, lipids and fatty acids composition. We also determined the content of ash and cadmium, calcium, lead, copper, chrome, iron, magnesium, manganese, potassium, sodium and zinc minerals. The average content of vitamin C was 1.79 g/100 g of pulp, it was higher than the one for other fruits, like pineapple, araca, cashew, guava, kiwi, orange, lemon, and strawberry and lower than the camu-camu sylvestral fruit of Amazonia. The contents of moisture, carbohydrate, fiber, lipids and minerals in the acerola were not significantly different when compared to other fruits.

5. Plants used in Guatemala for the treatment of dermatophytic infections. 2. Evaluation of antifungal activity of seven American plants.


From 52 plants screened for antifungal activity, 26 (50%) were active against dermatophytes. This paper reports further evaluation of seven American plants against four pathogenic fungi (Aspergillus flavus, Epidermophyton floccosum, Microsporum gypseum and Trichophyton rubrum), the part showing most activity, the best solvent and, in three cases, the minimal inhibitory concentration (MIC) against the fungus in pure culture. Antifungal activity was confirmed in all of the plants, but not all parts; the most active parts were the bark and leaves. The most active species were Byrsonima crassifolia, Cassia grandis, Gliricidia sepium and Malpighia glabra. Diphysa robinioides, Rhizophora mangle and Cassia occidentalis were less active. The most susceptible fungi were E. floccosum and T. rubrum; A. flavus was not susceptible. Ethanol was usually the best solvent and the MIC of C. grandis, C. occidentalis and D. robinioides was 50 micrograms/ml.