Abóbora - Cucurbita pepo

Planta rastejante; de folhas simples; flores solitárias, unissexuais; fruto peponídeo, muito variável na forma. É comum no Brasil.

Sinonímia Popular: Jerimum.

Princípio Ativo:

Fitosterina, globulina, fitina, sacarose, dextrose, lecitina, vitaminas A, B e C, sais minerais, ácidos oléicos, cucurbitacina.

Partes Usadas: o Fruto (cru), as Sementes, Folhas e Flores.

Uso Popular:

Chá das flores em descanso noturno é:
• estomático (combate infecções e inflamações da boca, aftas), anti-inflamatório para o fígado e baço; anti-inflamatório dos rins; anti-térmico;
• Sumo das folhas verdes pisadas é usado para queimaduras e erisipela;
• Polpa e sementes secas e tostadas com sal tem efeito vermífugo;
• Decocção da polpa: diarréia e gases.
• Sumo da polpa: contra prisão de ventre;
• Cataplasma das folhas: queimaduras, inflamações e dores de ouvido.

Uso Cientificamente Comprovados ou em Estudo:

• Rico em nutrientes: contem vitamina E, carotenóides, acido palmitico, estearico, oléico e linoleico (4-5)
• Auxilia no tratamento da hiperтроfia prostática benigna (7)
• Anti helmíntico (9)
• Anti parasitas (8)

Efeitos colaterais: Alergia alimentar (1)

Biblioteca:

1. Allergy caused by ingestion of zucchini (Cucurbita pepo): characterization of allergens and cross-reactivity to pollen and other foods.
Reindl J, Anliker MD, Karamloo F, Vieths S, Wuthrich B.
Paul-Ehrlich Institute, Department of Allergology, Langen, Germany.
BACKGROUND: Allergy to zucchini (Cucurbita pepo), a member of the Cucurbitaceae family, has not previously been reported. We examined 4 patients complaining of allergic symptoms, such as oral allergy syndrome, nausea, diarrhea, or pruritus, after the intake of zucchini. OBJECTIVE: After the confirmation of food allergy, we wanted to characterize zucchini allergens and examine possible cross-reactions to pollen and food. METHODS: The patients underwent skin prick and prick-to-prick-testing with different allergens, including zucchini, latex, and birch, ragweed, and grass pollen. Moreover a double-blind, placebo-controlled, food challenge was performed to confirm food allergy. Total and specific serum IgE levels were determined by using CAP-FEIA and the enzyme allergosorbent test method (EAST), respectively. Proteins from zucchini reacting with patient IgE were detected by means of immunoblotting. To characterize cross-reacting IgE antibodies, immunoblot- and EAST-inhibition assays were carried out. RESULTS: All patients in this study had positive reactions to zucchini both in prick-to-prick tests and double-blind, placebo-controlled, food challenges. Specific serum IgE levels to zucchini were found in all cases. In blot- and EAST-inhibition assays IgE from two patients revealed binding to zucchini profilin at about 15 kd. Furthermore, in two cases, including one of the profilin-positive patients, IgE directed against cross-reacting carbohydrate determinants was detected. For one patient, no cross-reacting IgE could be found, but IgE from this patient reacted strongly with a zucchini protein at 17 kd. CONCLUSIONS: We report the first 4 cases of food allergy to zucchini. Zucchini allergens can cause systemic reactions and are at least partially heat stable. We suggest that allergy to zucchini can occur as a result of primary sensitization to zucchini, as well as to cross-reactions to the panallergen profilin and cross-reacting carbohydrate determinants.

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Pumpkin (Cucurbita pepo) seeds are used locally in Eritrea to treat tapeworm. Seeds were found to be rich in oil (approximately 35%), protein (38%), alpha-tocoferols (3 mg/100 g) and carbohydrate content (approximately 37%). The physico-chemical properties and fatty acid composition of the seed oil were examined. The four dominant fatty acids found are: palmitic C16:0 (13.3%), stearic C18:0 (8.0%), oleic C18:1 (29.0%) and linoleic C18:2 (47.0%). The oil contains an appreciable amount of unsaturated fatty acids (78.0%) and found to be a rich source of linoleic acid (47.0%). Within the three localities of the study, variations exist in seed properties and the fatty acid composition of the oil.
PMID: 10846750 [PubMed - indexed for MEDLINE]

3. Comparative study of the chemical composition and nutritional value of pumpkin seed cake, soybean meal and casein.
Zdunczyk Z, Minakowski D, Frejnagel S, Flis M.
Polish Academy of Sciences, Institute of Animal Reproduction and Food Research, Olsztyn, Poland.

The chemical composition and nutritional value of pumpkin...
(Cucurbita pepo) seed cake (PSC) were studied and compared with those of casein and soybean meal. Crude protein and ether extract content in dry matter of PSC was 598.0 g/kg and 124.6 g/kg, respectively, and was higher than the percentage of these components (474.2 and 28.3 g/kg, respectively) in soybean meal used in this experiment. The main fatty acids in PSC cake were oleic acid (50.4%) and linoleic acid (29.9%). Protein found in PSC contained considerable quantities of tryptophan (1.54 g/16 g N); by contrast, the content of lysine (3.21 g/16 g N) and isoleucine (3.83 g/16 g N) was low. Small quantities of phenolic compounds (2.61 g/kg), low activity of trypsin inhibitors (1.33 TUI/mg) and small quantities of alpha-galactosides (19.9 g/kg) were found in PSC. Among antinutritive components only the content of inositol phosphates in PSC (40.5 mg/g) was higher than in soybean meal (10.8 mg/g). True digestibility coefficient (TD) of PSC protein was similar (83.1%), but protein efficiency ratio (PER) was lower (1.01) in comparison with soybean meal (83.5% and 1.50, respectively). After supplementation with lysine, TD (85.9%) and PER (1.43) in PSC were comparable with TD and PER to soybean meal. The PSC-soybean meal mix diet (protein ratio 1:1) had a higher PER value than the diet with soybean meal only (1.98 vs. 1.50).

4. Variability of fatty acid content in pumpkin seeds (Cucurbita pepo L.).
Murkovic M, Hillebrand A, Winkler J, Leitner E, Pfannhauser W.
Graz University of Technology, Department of Bio- and Food Chemistry, Austria.

Pumpkin (Cucurbita pepo L.) seed oil is a common salad oil which is produced in Slovenia, Hungary and the southern parts of Austria. It is dark green and has a high content of free fatty acids. The seed itself can be eaten. Due to its colour and the foam formation, the oil cannot be used for cooking. The content of vitamin E, especially gamma-tocopherol, is very high. The oil content of the pumpkin seed is about 50%. The variability in the oil content is very high resulting from a broad genetic diversity. Thus a breeding programme for increasing the oil productivity is very promising. The four dominant fatty acids are palmitic, stearic, oleic and linoleic acids. These four fatty acids make up 98 +/- 0.13% of the total amount of fatty acids, others being found at levels well below 0.5%.

5. Variability of vitamin E content in pumpkin seeds (Cucurbita pepo L.).
Murkovic M, Hillebrand A, Winkler J, Pfannhauser W.
Graz University of Technology, Department of Bio- and Food Chemistry, Austria.

Pumpkin (Cucurbita pepo L.) seed oil is a common salad oil which is produced in the southern parts of Austria, Slovenia and Hungary. It is dark green and has a high content of free fatty acids. Due to its colour, the oil cannot be used for cooking. The content of vitamin E, especially gamma-tocopherol, is very high. The oil content of the pumpkin seed is about 50%. The seed itself can be eaten. Therefore a pumpkin variety with high vitamin E content is desirable. The aim of this work was to find a variety of Cucurbita pepo which has a high oil yield and a high vitamin E content. A total of 100 breeding lines were tested for their tocopherol content. The tocopherols
and tocotrienols are extracted with hexane and analysed by NP-HPLC/FLD with hexane/dioxan (96/4) as eluent, with fluorescence detection at 292/335 nm. The gamma-tocopherol content, which is about 5-10 times as much as that of alpha-tocopherol varies over a broad range (41-620 mg/kg dry pumpkin seeds). Beta- and delta-tocopherol are found at low levels.

6. [Main carotenoids in pressed seeds (Cucurbitae semen) of oil pumpkin (Cucurbita pepo convar. pepo var. styriaca)]
[Article in Hungarian]
Pecsi Orvostudomanyi Egyetem Orvosi Kemiai Intezete, Pecs.

Various use of the oil-pumpkin offers reason for the phytochemical analysis of seed-meal's carotene pigments. Column chromatography was performed on the adsorbents MgO, Celite and CaCO3 with hexane and benzene as eluents. HPLC separation of different pigments was carried out on a 6 microns reverse phase packing with a ternary gradient elution method using a diode-array detector. The main components of the press-residue were lutein [3,3'-dihydroxy-alpha-carotene = (3R,3'R,6'R)-beta,epsilon-carotene-3,3'-diol; 52.5%] and beta-carotene (beta,epsilon-carotene; 10.1%). In addition to the above-mentioned pigments it was successful to reveal the presence of violaxanthin, luteoxanthin, auroxanthin epimers, lutein epoxide, flavoxanthin, chrysanthemaxanthin, 9(9')-cis-lutein, 13(13')-cis-lutein, 15-cis-lutein (central-cis)-lutein, alpha-cryptoxanthin, beta-cryptoxanthin and alpha-carotene (beta,epsilon-carotene) in small quantities.

7. Treatment of benign prostatic hyperplasia with phytosterols.
Carbin BE, Larsson B, Lindahl O.
Department of Urology, Karolinska Hospital, Stockholm, Sweden.

In a randomised, double-blind study, the preparation Curbicin, obtained from pumpkin seeds and dwarf palm plants (Cucurbita pepo L. and Sabal serrulata), was compared with a placebo in the treatment of symptoms caused by prostatic hyperplasia; 53 patients took part in the study, which was carried out over a 3-month period. Urinary flow, micturition time, residual urine, frequency of micturition and a subjective assessment of the effect of treatment were all significantly improved in the treatment group. No untoward side effects were noted.

8. A lectin from the exudate of the fruit of the vegetable marrow (Cucurbita pepo) that has a specificity for beta-1,4-linked N-acetylglucosamine oligosaccharides.
Allen AK.

Lectins are present in the exudate (presumably from the phloem) of the fruits of three species of the Cucurbitaceae, namely vegetable marrow (Cucurbita pepo), melon (Cucumis melo) and cucumber (Cucumis sativus). They are all strongly inhibited in their activities by chitin oligosaccharides, but only weakly by N-acetylglucosamine. Glycopeptides from soya-bean agglutinin and fetuin are also strong inhibitors of Cucurbita pepo lectin, indicating that it interacts with internal N-acetylglucosamine residues. The lectin from Cucurbita pepo fruit was purified by
affinity chromatography by using chitin oligosaccharides covalently attached to Sepharose. The lectin is not a glycoprotein, and it consists of a single polypeptide chain of about 20,000 mol.wt. It is a major protein (18% of the total) of the phloem exudate and it is postulated that it may have an anti-parasitic function.

9. [Anthelminthic action of Cucurbita pepo seeds.]
[Article in Bulgarian]
Todorov Vs.