

FICHE NUTRITIONNELLE

PRICKLY PEAR



Apport calorique

36,80 kcal pour 100 g

88,40 g Eau

4,45 g Fibres

6 g Glucides

77 mg Magnésium

0,58 mg Manganèse

Raw product



DESCRIPTION

- The prickly pear (*Opuntia ficus-indica*) belongs to the **Cactaceae** family.
- This plant grows in the wild in **arid** and **semi-arid regions** (Ennouri, 2014).
- It is a rapidly growing plant in **Tunisia** (Ennouri, 2014), but it is also widely present in **Mexico, North** and **South America**, as well as in **Africa, Australia** and the **Mediterranean region** in general ([Hernandez-Urbiola, 2011](#)).

PHYSICAL CHARACTERISTICS

- The fruit of the prickly pear is also called the **cactus pear** ([Enouri, 2014](#)) or **nopal** ([Hernandez-Urbiola, 2011](#)). The fruit contains **many seeds**.
- **Betalains** present in the skin and pulp of prickly pear are the **pigments** that give it its **colour**, ranging from yellow to purple ([Khatabi, 2016](#)).
- A Spanish team characterised the volatile profiles of the pulp of six prickly pear cultivars (NT, NE, NO, NA, FR, and ORI). A total of **35 compounds** were identified, with **aldehydes, alcohols** and **terpenes** being the predominant families. Esters, ketones, linear hydrocarbons and terpenoids were also found ([Andreu-Coll, 2020](#)).
- Prickly pear is characterised by a « **sweet** » and « **bitter** » **taste** ([Ochoa-Velasco, 2016](#); [Nunes, 2017](#)).

COMPOSITION CHARACTERISTICS (EXCLUDING MACRONUTRIENTS, VITAMINS AND MINERALS)

- Plants of the *Opuntia* genus exhibit **health-promoting** properties resulting mainly from their **high content of antioxidants** (flavonoids, ascorbate), **pigments** (carotenoids, betalains) and **phenolic acids** ([Del Socorro, 2017](#)).
- Containing notable amounts of phenolic compounds with antioxidant properties but also **nutrients, fibre** and **minerals**, prickly pear is said to be beneficial in fighting **atherosclerosis, diabetes**, indigestion, **inflammation** and other immune-related symptoms ([Jeong, 2018](#)).
- The **polyphenols** and **betalains** contained in prickly pear give it its **antioxidant properties**. However, its polyphenol content reportedly depends on the variety: in particular, **red prickly pear** is thought to have a **higher polyphenol content** than **yellow prickly pear** ([Khatabi, 2016](#)).
- **Betalains**, consisting of betacyanins and betaxanthins, are reported to be **beneficial** in **diseases related to oxidative stress, inflammation** and **dyslipidemia**, such as artery stenosis, atherosclerosis, hypertension and cancer ([Rahimi, 2019](#)).
- Prickly pear is also reported to exhibit **estrogenic activities**¹ due to the presence of flavonoid phytoestrogens such as isorhamnetin, kaempferol and quercetin ([Jeong, 2018](#)).
- At the **seed** level, extensive analysis revealed the presence of **calcium** (471.2 mg/kg), **potassium** (532.7 mg/kg), **magnesium** (117.3 mg/kg) and **phosphorus** (1627.5 mg/kg) ([Özcan, 2011](#)).

COMPOSITION ET ANALYSE NUTRITIONNELLE

RAW

The following values are approximate and depend on variety, season, ripeness, cultivation conditions, etc. Prickly pear is **low in energy*** because it provides an average of **36.80 calories (kcal)** per 100 g, i.e. **154 kJ**. A prickly pear weighs on average 50 to 400 g depending on the size, which corresponds to an energy intake ranging from 18.40 to 147.20 kcal.

COMPOSITION TABLES

For each nutrient, the tables provide information on the content, minimum and maximum values, as well as the

percentage of the Dietary Reference Values (DRVs) for 100 g net of prickly pear, pulp and seeds, raw .
Regulation (EC) No 1924/2006 of the European Parliament and of the Council of 20 December 2006 on nutrition and health claims made on foods.

MACRONUTRIMENTS

Valeurs

Constituant (g)	Teneur moyenne	Min-Max pour 100 g	% VNR
Eau	88,4	87,60 - 89,20	-
Fibres	4,45	3,60 - 5,30	-
Glucides	6	-	2,31
<i>dont Sucres</i>	1,02	-	1,13
Lipides	0,31	0,11 - 0,50	0,44
<i>dont Acides Gras Saturés</i>	< 0,01	-	0,05
Protéines	0,37	0,12 - 0,63	0,74

Sources

Constituant (g)	Quantité	Min-Max	% VNR
Eau	Ciquel 2020	-	-
Fibres	Ciquel 2020	-	-
Glucides	Ciquel 2020	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
<i>dont Sucres</i>	Ciquel 2020	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Lipides	Ciquel 2020	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
<i>dont Acides Gras Saturés</i>	Ciquel 2020	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011

Constituant (g)	Quantité	Min-Max	% VNR
Protéines	Ciquel 2020	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011

Zoom on carbohydrates

- The prickly pear contains a lower amount of carbohydrates (6 g per 100 g) than the average quantity found in fresh fruit: 11.31 g per 100 g approximately.
- The prickly pear **is low in sugar*** (1.02 g per 100 g) as it contains no more than 5 g per 100 g.

Zoom on fibres

- The prickly pear is a **source of fibre***, as it provides more than 3 g per 100 g, i.e. 4.45 g.
- This amount of fibre is higher than the average content found in fresh fruit (2.77 g per 100 g).

Zoom on proteins

- The protein content of prickly pear (0.37 g per 100 g) is lower than the average amount in fresh fruit: 0.93 g per 100 g.

Zoom on lipids

- Its fat content (0.31 g per 100 g) is lower than the average amount found in fresh fruit: 0.56 g per 100 g.
- The prickly pear **is fat-free*** as it contains less than 0.5 g of fat per 100 g.

Regulation (EC) No 1924/2006 of the European Parliament and of the Council of 20 December 2006 on nutrition and health claims made on foods.

MINÉRAUX ET OLIGO-ÉLÉMENTS

Valeurs

Constituant	Teneur moyenne	Min-Max pour 100 g	% VNR
Calcium (mg)	118	56 - 180	14,75
Chlorure (mg)	-	-	-
Cuivre (mg)	0,019	-	1,90
Fer (mg)	0,25	0,20 - 0,30	1,79
Iode (µg)	1,50	-	1
Magnésium (mg)	77	69 - 85	20,53
Manganèse (mg)	0,58	-	29
Phosphore (mg)	17,50	11 - 24	2,50

Constituant	Teneur moyenne	Min-Max pour 100 g	% VNR
Potassium (mg)	175	130 - 220	8,75
Sélénium (µg)	-	-	-
Sodium (mg)	4,50	4 - 5	-
Zinc (mg)	0,14	-	1,40

Sources

Constituant	Quantité	Min-Max	% VNR
Calcium (mg)	Ciqua 2020	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Chlorure (mg)	Ciqua 2020	-	Règlement (UE) N°1169/2011 du parlement Européen, et du conseil du 25 octobre 2011
Cuivre (mg)	Ciqua 2020	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Fer (mg)	Ciqua 2020	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Iode (µg)	Ciqua 2020	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Magnésium (mg)	Ciqua 2020	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Manganèse (mg)	Ciqua 2020	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Phosphore (mg)	Ciqua 2020	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011

Constituant	Quantité	Min-Max	% VNR
Potassium (mg)	Ciqua 2020	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Sélénium (µg)	Ciqua 2020	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Sodium (mg)	Ciqua 2020	-	-
Zinc (mg)	Ciqua 2020	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011

Zoom on minerals and trace elements

- The prickly pear is a **source of**:
 - **manganese**, as it provides the equivalent of 29% of DRVs, i.e. 0.58 mg per 100 g;
 - **magnesium**, as it provides the equivalent of 20.53% of DRVs, i.e. 77 mg per 100 g. According to the Ciqua 2020 table, the prickly pear is one of the fruits with the highest magnesium content.
- The **calcium** content of the prickly pear is also noteworthy as it represents 118 mg per 100 g, which corresponds to 14.75% of DRVs. Moreover, it is one of the fruits that contains the most calcium (Ciqua 2020 table).
- The other minerals and trace elements are present in quantities representing less than 9% of DRVs.

VITAMINES

Valeurs

Constituant	Teneur moyenne	Min-Max pour 100 g	% VNR
Provitamine A Béta-carotène (µg)	60	-	-
Équivalent Vitamine A (µg)	10	-	1,25
Vitamine B1 (mg)	0,011	0,008 - 0,014	1
Vitamine B2 (mg)	0,046	0,032 - 0,06	3,29
Vitamine B3 (mg)	0,38	0,29 - 0,46	2,38
Vitamine B5 (mg)	-	-	-
Vitamine B6 (mg)	0,079	-	5,64
Vitamine B9 (µg)	8	-	4

Constituant	Teneur moyenne	Min-Max pour 100 g	% VNR
Vitamine C (mg)	12,50	11 - 14	15,63
Vitamine E (mg)	< 0,01	-	0,08
Vitamine K1 (µg)	2,90	-	3,87

Sources

Constituant	Quantité	Min-Max	% VNR
Provitamine A Béta-carotène (µg)	Ciqua 2020	-	-
Équivalent Vitamine A (µg)	Calcul à partir de la valeur Provitamine A Béta-carotène*	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Vitamine B1 (mg)	Ciqua 2020	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Vitamine B2 (mg)	Ciqua 2020	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Vitamine B3 (mg)	Ciqua 2020	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Vitamine B5 (mg)	Ciqua 2020	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Vitamine B6 (mg)	Ciqua 2020	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Vitamine B9 (µg)	Ciqua 2020	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Vitamine C (mg)	Ciqua 2020	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011

Constituant	Quantité	Min-Max	% VNR
Vitamine E (mg)	Ciquel 2020	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Vitamine K1 (µg)	Ciquel 2020	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011

Zoom on vitamins

- The prickly pear is a **source of vitamin C**, as it provides the equivalent of 15.63% of DRVs, i.e. 12.50 mg per 100 g.
- The other vitamins are present in quantities representing less than 6% of DRVs.

Calculation made: Beta-Carotene / 6 + retinol

ALLÉGATIONS NUTRITIONNELLES ET DE SANTÉ

ALLÉGATIONS NUTRITIONNELLES ET DE SANTÉ RAW

According to the definitions of nutrition claims as set out in Regulation (EC) No 1924/2006 on nutrition and health claims, and in view of the composition of prickly pear, the following claims may be used:

NUTRITION CLAIMS OF PRICKLY PEAR

- **Low in energy** (100 g of prickly pear provide less than 40 kcal)
- **Low in sugar** (100 g of prickly pear contain no more than 5 g of sugar)
- **Fat-free** (100 g of prickly pear contain less than 0.5 g of fat)
- **Source of fibre** (100 g of prickly pear contain more than 3 g of fibre)
- **Source of manganese** (100 g of prickly pear provide the equivalent of more than 15% of DRVs).
- **Source of magnesium** (100 g of prickly pear provide the equivalent of more than 15% of DRVs).
- **Source of vitamin C** (100 g of prickly pear provide the equivalent of more than 15% of DRVs).

HEALTH CLAIMS (FOR A CONSUMPTION OF 100 G OF PRICKLY PEAR)

Manganese

- Manganese contributes to:
 - normal energy-yielding metabolism,
 - maintenance of normal bones,
 - normal formation of connective tissues,
 - protection of cells from oxidative stress.

Magnesium

- Magnesium contributes to:
 - reduction of tiredness and fatigue,
 - electrolyte balance,
 - normal energy-yielding metabolism,
 - normal functioning of the nervous system,
 - normal muscle function,
 - normal protein synthesis,
 - normal psychological function,
 - maintenance of normal bones,
 - maintenance of normal teeth.
- Magnesium plays a role in the process of cell division.

Vitamin C

- Vitamin C contributes to:
 - normal function of the immune system during and after intense physical exercise,
 - normal collagen formation for the normal function of blood vessels,
 - normal collagen formation for the normal function of bones,
 - normal collagen formation for the normal function of cartilage,
 - normal collagen formation for the normal function of gums,
 - normal collagen formation for the normal function of skin,
 - normal collagen formation for the normal function of teeth,
 - normal energy-yielding metabolism,
 - normal functioning of the nervous system,
 - normal psychological function,
 - normal function of the immune system,
 - protection of cells from oxidative stress,
 - reduction of tiredness and fatigue,
 - regeneration of the reduced form of vitamin E.
- Vitamin C increases iron absorption.

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