

FICHE NUTRITIONNELLE

MANGO



Apport calorique

73,90 kcal pour 100 g

81,10 g Eau

1,60 g Fibres

14,30 g Glucides

70,20 µg Vitamine B9

25 mg Vitamine C

Raw product



DESCRIPTION

- The **mango tree** (*Mangifera indica* L.) belongs to the **Anacardiaceae** family.
- **India** is the largest producer of mangoes in the world ([Ramayya, 2012](#)).
- It is a very popular **tropical fruit** across the world because of its colour, characteristic taste and nutritional value ([Ramayya, 2012](#)).

PHYSICAL AND ORGANOLEPTIC CHARACTERISTICS

- Mango is a **climacteric fruit** that ripens quickly after harvest ([Ramayya, 2012](#)).
- Mango skin is **green** when the fruit is not yet ripe and may turn **red, yellow**, or retain its **green** colour at full ripeness depending on the cultivars ([Karanjalker, 2018](#)).
- **Carotenoids** are the major components responsible for the bright yellow colour of mango pulp ([Ramayya, 2012](#)). The yellow-skinned 'Arka Anmol' cultivars are reported to have higher post-ripening carotenoid contents, mostly **β-carotene** and **violaxanthin**, while the red-skinned 'Janardhan Pasand' cultivars are reported to have higher **anthocyanin** contents, mainly cyanidin-3-O-monoglucosides and peonidin-3-O-glucosides ([Karanjalker, 2018](#)).
- An Indian team characterised the pigment profiles of mango skin during ripening. **β-carotene**, violaxanthin and cis-**β-carotene** were the major **carotenoid** pigments that significantly increased during ripening, while **anthocyanin** pigments of cyanidin, peonidin, petunidin, delphinidin and pelargonidin groups showed no difference. Moreover, **chlorophyll** degradation was observed during fruit ripening (Ranganath, 2018).
- Fruit **firmness** is also an indicator of fruit ripeness: the less firm the fruit, the closer it is to ripeness ([Zakaria, 2012](#)).
- The **aroma of the** 'Alphonso' **mango** cultivar is characterised by 26 volatile molecules ([Chidley, 2013](#)), including 2 belonging to the furanone family: furaneol and mesifuran ([Kulkarni, 2013a](#)). Compared to other fruits, mango is reported to have the highest concentration of these 2 components ([Kulkarni, 2013a](#)).
- **Mango flavour** is thought to be attributable to volatile compounds such as fruity esters, including 1-octanol, (E, Z)-2,6-nonadienal and γ-octalactone. On the other hand, the « green » turpentine-like flavor is reportedly correlated with high terpene levels ([Sung, 2019](#)) that increase during ripening ([Chidley, 2013](#)).
- **Mango taste** may vary depending on the geographical area and climate in which the fruit is grown ([Kulkarni, 2013b](#)).

COMPOSITION CHARACTERISTICS (EXCLUDING MACRONUTRIENTS, VITAMINS AND MINERALS)

- An Italian team sought to characterise the **polyphenol** and **carotenoid** content of mango pulp. The polyphenols identified were mangiferin, gallic acid, gallotannins, quercetin, isoquercetin, ellagic acid and β-glucogallin. Gallic acid was the most represented phenolic compound in this fraction ([Lauricella, 2017](#)).
- Mango pulp is reported to contain other polyphenols such as **phenolic acids** including chlorogenic, vanillic, and ferulic acid ([Vithana, 2018](#)).
- Mango pulp is particularly rich in **carotenoids**. Up to 25 carotenoids have been identified such as **provitamin A (or β-carotene)**, **lutein** and **α-carotene** ([Lauricella, 2017](#); [Ranganath, 2018](#)).
- The **carotenoids** and **phenolic compounds** in mango are reported to have **antioxidant** and **anti-inflammatory** effects, conferring health benefits and limiting the development of cardiovascular diseases, type 2 diabetes, metabolic syndromes and cancer for example ([Lauricella, 2017](#); [Wall-Medrano, 2019](#)).
- **Antioxidant** content (ascorbic acid and total phenols) and functional factors of mango vary among cultivars. Analysis of different Bangladeshi mango varieties (Fazli, Langra, Ashwina, Himsagor and Amrupali) showed that the 'Langra' variety had the highest phenol content and antioxidant properties compared to the other varieties,

while the 'Ashwina' variety showed the highest ascorbic acid content ([Lauricella, 2017](#)).

COMPOSITION ET ANALYSE NUTRITIONNELLE

RAW

The following values are approximate and depend on variety, season, ripeness, cultivation conditions, etc. The average mango provides **73.90 calories (kcal)** per 100 g, i.e. **314 kJ**. A mango weighs on average 400 g, which represents 295.60 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) per 100 g net of mango.

MACRONUTRIMENTS

Valeurs

Constituant (g)	Teneur moyenne	Min-Max pour 100 g	% VNR
Eau	81,1	80,80 - 88,10	-
Fibres	1,60	1,20 - 2,30	-
Glucides	14,30	12,50 - 15,20	5,50
<i>dont Sucres</i>	12,90	7,88 - 13,70	14,33
Lipides	< 0,50	0,10 - 0,60	-
<i>dont Acides Gras Saturés</i>	< 0,01	NC - 0,12	-
Protéines	0,63	0,44 - 1,14	1,26

Sources

Constituant (g)	Quantité	Min-Max	% VNR
Eau	Ciqua 2020 (valeur issue des analyses Ciqua-Aprifel 2017)	-	-
Fibres	Ciqua 2020 (valeur issue des analyses Ciqua-Aprifel 2017)	-	-
Glucides	Ciqua 2020	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011

Constituant (g)	Quantité	Min-Max	% VNR
<i>dont Sucres</i>	Ciqual 2020 (valeur issue des analyses Ciqual-Aprifel 2017)	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Lipides	Ciqual 2020 (valeur issue des analyses Ciqual-Aprifel 2017)	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
<i>dont Acides Gras Saturés</i>	Ciqual 2020 (valeur issue des analyses Ciqual-Aprifel 2017)	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Protéines	Ciqual 2020 (valeur issue des analyses Ciqual-Aprifel 2017)	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011

Zoom on carbohydrates

- The energy of mango comes mainly from its carbohydrates, at 14.30 g per 100 g.
- This content is above the average amount in fresh fruit: about 11.31 g per 100 g.
- Its carbohydrates are mainly sugar, in the form of sucrose (8.50 g per 100 g), fructose (3.40 g per 100 g) and glucose (1 g per 100 g), and starch (1.10 g per 100 g).

Zoom on fibres

- Mango contains an average of 1.60 g of fibre per 100 g, which is lower than the average content in fresh fruit (2.77 g per 100 g).

Zoom on proteins

- The protein content of mango (0.63 g per 100 g) is lower than the average amount found in fresh fruit: 0.93 g per 100 g.

Zoom on lipids

- The fat content of mango is less than 0.5 g per 100 g; **mango is therefore fat-free***.

*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)	12	7 - 25,80	1,50
Chlorure (mg)	21,80	-	2,73
Cuivre (mg)	0,07	0,045 - 0,32	7
Fer (mg)	0,09	NC - 0,41	0,64
Iode (µg)	< 20	0,04 - NC	-
Magnésium (mg)	11	6,20 - 19	2,93
Manganèse (mg)	0,07	0,027 - 0,12	3,50
Phosphore (mg)	12	10 - 20,90	1,71
Potassium (mg)	150	12 - 211	7,50
Sélénium (µg)	< 20	0 - NC	-
Sodium (mg)	< 5	0 - 12	-
Zinc (mg)	0,11	0,06 - 0,15	1,10

Sources

Constituant	Quantité	Min-Max	% VNR
Calcium (mg)	Ciqual 2020 (valeur issue des analyses Ciqual-Aprifel 2017)	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Chlorure (mg)	Ciqual 2020 (valeur issue des analyses Ciqual-Aprifel 2017)	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Cuivre (mg)	Ciqual 2020 (valeur issue des analyses Ciqual-Aprifel 2017)	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Fer (mg)	Ciqual 2020 (valeur issue des analyses Ciqual-Aprifel 2017)	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Iode (µg)	Ciqual 2020	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011

Constituant	Quantité	Min-Max	% VNR
Magnésium (mg)	Ciqua 2020 (valeur issue des analyses Ciqua-Aprifel 2017)	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Manganèse (mg)	Ciqua 2020 (valeur issue des analyses Ciqua-Aprifel 2017)	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Phosphore (mg)	Ciqua 2020 (valeur issue des analyses Ciqua-Aprifel 2017)	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Potassium (mg)	Ciqua 2020 (valeur issue des analyses Ciqua-Aprifel 2017)	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Sélénium (µg)	Ciqua 2020 (valeur issue des analyses Ciqua-Aprifel 2017)	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Sodium (mg)	Ciqua 2020 (valeur issue des analyses Ciqua-Aprifel 2017)	-	-
Zinc (mg)	Ciqua 2020 (valeur issue des analyses Ciqua-Aprifel 2017)	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011

Zoom on minerals and trace elements

- Potassium is the best-represented mineral in mango with a content representing 7.50% of DRVs, i.e. 150 mg per 100 g.
- The other minerals and trace elements are present in quantities representing less than 8% of DRVs.

VITAMINES

Valeurs

Constituant	Teneur moyenne	Min-Max pour 100 g	% VNR
Provitamine A Béta-carotène (µg)	864	185 - 1680	-
Équivalent Vitamine A (µg)	144	30,83 - 280	18
Vitamine B1 (mg)	< 0,015	0,014 - 0,058	-

Constituant	Teneur moyenne	Min-Max pour 100 g	% VNR
Vitamine B2 (mg)	< 0,01	NC - 0,072	-
Vitamine B3 (mg)	0,72	0,20 - 1,31	4,50
Vitamine B5 (mg)	0,18	0,16 - 0,24	3
Vitamine B6 (mg)	0,10	0,053 - 0,16	7,14
Vitamine B9 (µg)	70,20	9,40 - 129	35,10
Vitamine C (mg)	25	13,20 - 92,80	31,25
Vitamine E (mg)	2,05	0,79 - NC	17,08
Vitamine K1 (µg)	1,12	NC - 4,20	1,49

Sources

Constituant	Quantité	Min-Max	% VNR
Provitamine A Béta-carotène (µg)	Ciqual 2020 (valeur issue des analyses Ciqual-Aprifel 2017)	-	-
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)	Ciqual 2020 (valeur issue des analyses Ciqual-Aprifel 2017)	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Vitamine B2 (mg)	Ciqual 2020 (valeur issue des analyses Ciqual-Aprifel 2017)	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Vitamine B3 (mg)	Ciqual 2020 (valeur issue des analyses Ciqual-Aprifel 2017)	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Vitamine B5 (mg)	Ciqual 2020 (valeur issue des analyses Ciqual-Aprifel 2017)	-	Règlement (UE) N°1169/2011 du parlement Européen, et du conseil du 25 octobre 2011
Vitamine B6 (mg)	Ciqual 2020 (valeur issue des analyses Ciqual-Aprifel 2017)	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011

Constituant	Quantité	Min-Max	% VNR
Vitamine B9 (µg)	Ciqua 2020 (valeur issue des analyses Ciqua-Aprifel 2017)	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Vitamine C (mg)	Ciqua 2020 (valeur issue des analyses Ciqua-Aprifel 2017)	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Vitamine E (mg)	Ciqua 2020 (valeur issue des analyses Ciqua-Aprifel 2017)	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011
Vitamine K1 (µg)	Ciqua 2020 (valeur issue des analyses Ciqua-Aprifel 2017)	-	Règlement (UE) N°1169/2011 du parlement Européen et du conseil du 25 octobre 2011

Zoom on vitamins

- Mango is **high in**:
 - **vitamin B9**, as it provides the equivalent of 35.10% of DRVs, i.e. 70.20 µg per 100 g;
 - **vitamin C**, as it provides the equivalent of 31.25% of DRVs, i.e. 25 mg per 100 g.
- Mango is a **source of**:
 - **vitamin A**, carotenoid family, as it provides the equivalent of 18% of DRVs, i.e. 144 µg per 100 g. Mango is one of the fruits that contains the most β-carotene (in 5th place) according to the Ciqua 2020 table.
 - **vitamin E**, as it provides the equivalent of 17.08% of DRVs, i.e. 2.05 mg per 100 g. After blackcurrant, mango is the fruit that contains the most vitamin E (Ciqua 2020 table).

- The other vitamins are present in quantities representing less than 8% of DRVs.

*Calculation made: Beta-Carotene / 6 + retinol

POLYPHÉNOLS

Valeurs

Constituant (g)	Teneur moyenne	Min-Max pour 100 g
Flavonoïdes (mg)	1,72	-
<i>dont Flavanols (mg)</i>	1,72	-
Polyphénols totaux	1,72	-

Sources

Constituant (g)	Quantité	Min-Max
Flavonoïdes	Phenol explorer 3.6 -Méthode utilisée : Chromatographie	-
<i>dont Flavanols</i>	Phenol explorer 3.6 -Méthode utilisée : Chromatographie	-
Polyphénols totaux	Phenol explorer 3.6 - Méthode utilisée : Chromatographie	-

Zoom on polyphenols

- Polyphenols are substances with an antioxidant effect.
- Mango contains few polyphenols according to the chromatography method. These polyphenols are in the form of **flavanols**, from the flavonoid family

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 mango, the following claims may be used:

NUTRITION BENEFITS OF MANGO

- **High in vitamin B9** (100 g of mango provide the equivalent of more than 30% of DRVs)
- **High in vitamin C** (100 g of mango provide the equivalent of more than 30% of DRVs)
- **Source of vitamin A** (100 g of mango provide the equivalent of more than 15% of DRVs)
- **Source of vitamin E** (100 g of mango provide the equivalent of more than 15% of DRVs)
- **Fat-free** (100 g of mango contain less than 0.5 g of fat)

HEALTH CLAIMS (FOR A CONSUMPTION OF 100 G OF MANGO)

Folates or vitamin B9

- Folates contribute to:
 - maternal tissue growth during pregnancy,
 - normal amino acid synthesis,
 - normal blood formation,
 - normal homocysteine metabolism,
 - normal psychological function,
 - normal function of the immune system,
 - reduction of tiredness and fatigue.
- Folates have 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.

Vitamin A

- Vitamin A has a role in the process of cell specialisation.
- Vitamin A contributes to:
 - maintenance of normal skin,
 - maintenance of normal mucous membranes,
 - maintenance of normal vision,
 - normal iron metabolism,
 - normal function of the immune system.

Vitamin E

- Vitamin E contributes to the protection of cells from oxidative stress.

- Agence nationale de sécurité sanitaire de l'alimentation, de l'environnement et du travail. Table de composition nutritionnelle des aliments Ciqua 2020. Consultée le 11/08/2020 depuis le site internet Ciqua <https://ciqua.anses.fr/>
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