



Document details

[← Back to results](#) | [← Previous](#) 3 of 3[↗ Export](#) [↓ Download](#) [🖨 Print](#) [✉ E-mail](#) [📄 Save to PDF](#) [★ Add to List](#) [More... >](#)[Full Text](#) View at PublisherFood Research International
Volume 115, January 2019, Pages 105-115Valuable components of bambangan fruit (*Mangifera pajang*) and its co-products: A review (Article)Jahurul, M.H.A.^a ✉, Zaidul, I.S.M.^b, Beh, L.^a, Sharifudin, M.S.^a, Siddiquee, S.^c, Hasmadi, M.^a, Sahena, F.^d, Mansoor, A.H.^a, Lee, J.S.^a, Jinap, S.^{e,f} ^aFaculty of Food Science and Nutrition, Universiti Malaysia Sabah, Kota Kinabalu, Sabah 88400, Malaysia^bFaculty of Pharmacy, International Islamic University Malaysia, Kuantan, Pahang 25200, Malaysia^cBiotechnology Research Institute, Universiti Malaysia Sabah, Kota Kinabalu, MalaysiaView additional affiliations ∨

Abstract

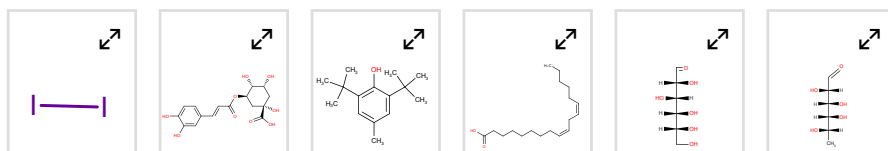
∨ View references (110)

Fruits are important food commodities that can be consumed either raw or processed and are valued for their taste, nutrients, and healthy compounds. *Mangifera pajang* Kosterm (bambangan) is an underutilized fruit found in Malaysia (Sabah and Sarawak), Brunei, and Indonesia (Kalimantan). It is highly fibrous and juicy with an aromatic flavour and strong smell. In recent years, bambangan fruit has been gaining more attention due to its high fibre, carotenoid content, antioxidant properties, phytochemicals, and medicinal usages. Therefore, the production, trade, and consumption of bambangan fruit could be increased significantly, both domestically and internationally, because of its nutritional value. The identification and quantification of bioactive compounds in bambangan fruit has led to considerable interest among scientists. Bambangan fruit and its waste, especially its seeds and peels, are considered cheap sources of valuable food and are considered nutraceutical ingredients that could be used to prevent various diseases. The use of bambangan fruit waste co-products for the production of bioactive components is an important step towards sustainable development. This is an updated report on the nutritional composition and health-promoting phytochemicals of bambangan fruit and its co-products that explores their potential utilization. This review reveals that bambangan fruit and its co-products could be used as ingredients of dietary fibre powder or could be incorporated into food products (biscuits and macaroni) to enhance their nutraceutical properties. © 2018 Elsevier Ltd

SciVal Topic Prominence ⓘTopic: Mangiferin | Mangoes | *Mangifera Indica* ExtractProminence percentile: 93.342 ⓘChemistry database information ⓘ

Substances

View all substances (20)



Author keywords

[Antioxidant properties](#) [Bambangan fruit](#) [Bambangan peel](#) [Bioactive compounds](#) [Kernels](#)

Indexed keywords

Metrics ⓘ [View all metrics >](#)5 Citations in Scopus
79th percentile1.41 Field-Weighted
Citation ImpactPlumX Metrics ∨Usage, Captures, Mentions,
Social Media and Citations
beyond Scopus.

Cited by 5 documents

Formulation of choline chloride/ascorbic acid natural deep eutectic solvent: Characterization, solubilization capacity and antioxidant property

Ling, J.K.U. , Chan, Y.S. , Nandong, J. (2020) *LWT*

Characteristics of bambangan kernel fat fractions produced by solvent fractionation and their potential industrial applications

Norazlina, M.R. , Jahurul, M.H.A. , Hasmadi, M. (2020) *Journal of Food Processing and Preservation*Functional and nutritional properties of rambutan (*Nephelium lappaceum* L.) seed and its industrial application: A reviewJahurul, M.H.A. , Azzatul, F.S. , Sharifudin, M.S. (2020) *Trends in Food Science and Technology*

View all 5 citing documents

Inform me when this document is cited in Scopus:

[Set citation alert >](#)[Set citation feed >](#)

Related documents

Engineering controlled terms: [Antioxidants](#) [Nutrition](#) [Plants \(botany\)](#)

Engineering uncontrolled terms: [Antioxidant properties](#) [Bioactive components](#) [Bioactive compounds](#) [Kernels](#)
[Nutraceuticals](#) [Nutritional compositions](#) [Nutritional value](#) [Valuable component](#)

Engineering main heading: [Fruits](#)

EMTREE drug terms: [antioxidant](#) [phytochemical](#) [plant extract](#)

EMTREE medical terms: [Brunei Darussalam](#) [chemistry](#) [dietary fiber](#) [dietary supplement](#) [fruit](#) [human](#)
[Indonesia](#) [Malaysia](#) [Mangifera](#) [nutritional value](#) [plant seed](#) [waste](#)

MeSH: [Antioxidants](#) [Brunei](#) [Dietary Fiber](#) [Dietary Supplements](#) [Fruit](#) [Humans](#)
[Indonesia](#) [Malaysia](#) [Mangifera](#) [Nutritive Value](#) [Phytochemicals](#) [Plant Extracts](#)
[Seeds](#) [Waste Products](#)

Phytochemistry and pharmacology of *Mangifera pajang*: An iconic fruit of Sabah, Malaysia

Tangah, J. , Bajau, F.E. , Jilimin, W.
(2017) *Systematic Reviews in Pharmacy*

Comparison of chemical composition, antimicrobial and antioxidant activities of essential oils extracted from different parts of bambangan (*mangifera pajang*) Fruit

Fan, L.N. , Abu Bakar, M.F. , Md Nor, N.A.
(2018) *Asian Journal of Chemistry*

Characteristics of bambangan kernel fat fractions produced by solvent fractionation and their potential industrial applications

Norazlina, M.R. , Jahurul, M.H.A. , Hasmadi, M.
(2020) *Journal of Food Processing and Preservation*

Chemicals and CAS Registry Numbers:

Antioxidants; Dietary Fiber; Phytochemicals; Plant Extracts; Waste Products

View all related documents based on references

Funding details

Funding sponsor	Funding number	Acronym
-----------------	----------------	---------

	SBK0413-2018	
--	--------------	--

Funding text

This research was supported by the Centre for Research and Innovation , UMS (SBK0413-2018).

Find more related documents in Scopus based on:

Authors > Keywords >

ISSN: 09639969

CODEN: FORIE

Source Type: Journal

Original language: English

DOI: 10.1016/j.foodres.2018.08.017

PubMed ID: 30599921

Document Type: Article

Publisher: Elsevier Ltd

References (110)

[View in search results format >](#)

All Export Print E-mail Save to PDF Create bibliography

- 1 Abbasi, A.M., Guo, X., Fu, X., Zhou, L., Chen, Y., Zhu, Y., Yan, H., (...), Liu, R.H.
Comparative assessment of phenolic content and in vitro antioxidant capacity in the pulp and peel of mango cultivars ([Open Access](#))

(2015) *International Journal of Molecular Sciences*, 16 (6), pp. 13507-13527. Cited 18 times.

<http://www.mdpi.com/1422-0067/16/6/13507/pdf>

doi: 10.3390/ijms160613507

[View at Publisher](#)

- 2 Abdalla, A.E.M., Darwish, S.M., Ayad, E.H.E., El-Hamahmy, R.M.
Egyptian mango by-product 1. Compositional quality of mango seed kernel

(2007) *Food Chemistry*, 103 (4), pp. 1134-1140. Cited 132 times.

doi: 10.1016/j.foodchem.2006.10.017

[View at Publisher](#)

- 3 Abdullah, A.-S.H., Mohammed, A.S., Abdullah, R., Mirghani, M.E.S., Al-Qubaisi, M.
Cytotoxic effects of *Mangifera indica* L. kernel extract on human breast cancer (MCF-7 and MDA-MB-231 cell lines) and bioactive constituents in the crude extract
([Open Access](#))

(2014) *BMC Complementary and Alternative Medicine*, 14, art. no. 199. Cited 55 times.
<http://www.biomedcentral.com/1472-6882/14/199>
doi: 10.1186/1472-6882-14-199

[View at Publisher](#)
-
- 4 Ahmad, S., Sukari, M.A., Ismail, N., Ismail, I.S., Abdul, A.B., Abu Bakar, M.F., Kifli, N., (...), Ee, G.C.L.
Phytochemicals from *Mangifera pajang* Kosterm and their biological activities
([Open Access](#))

(2015) *BMC Complementary and Alternative Medicine*, 15 (1), art. no. 83. Cited 25 times.
<http://www.biomedcentral.com/bmccomplementalrternmed/>
doi: 10.1186/s12906-015-0594-7

[View at Publisher](#)
-
- 5 Ajila, C.M., Bhat, S.G., Prasada Rao, U.J.S.
Valuable components of raw and ripe peels from two Indian mango varieties

(2007) *Food Chemistry*, 102 (4), pp. 1006-1011. Cited 241 times.
doi: 10.1016/j.foodchem.2006.06.036

[View at Publisher](#)
-
- 6 Ajila, C.M., Leelavathi, K., Prasada Rao, U.J.S.
Improvement of dietary fiber content and antioxidant properties in soft dough biscuits with the incorporation of mango peel powder

(2008) *Journal of Cereal Science*, 48 (2), pp. 319-326. Cited 256 times.
doi: 10.1016/j.jcs.2007.10.001

[View at Publisher](#)
-
- 7 Al-Neshawy, A.A., Al-Eid, S.M.
Improving the quality and oxidative stability of vegetable oil shortening using fermented dairy products and wheat gluten

(2000) *Food Chemistry*, 71 (1), pp. 57-60. Cited 5 times.
doi: 10.1016/S0308-8146(00)00125-4

[View at Publisher](#)
-
- 8 Al-Sheraji, S.H., Ismail, A., Manap, M.Y., Mustafa, S., Yusof, R.M., Hassan, F.A.
Functional properties and characterization of dietary fiber from *mangifera pajang* kort. Fruit pulp

(2011) *Journal of Agricultural and Food Chemistry*, 59 (8), pp. 3980-3985. Cited 46 times.
doi: 10.1021/jf103956g

[View at Publisher](#)
-
- 9 Al-Sheraji, S.H., Ismail, A., Manap, M.Y., Mustafa, S., Yusof, R.M., Hassan, F.A.
Fermentation and non-digestibility of *Mangifera pajang* fibrous pulp and its polysaccharides

(2012) *Journal of Functional Foods*, 4 (4), pp. 933-940. Cited 27 times.
doi: 10.1016/j.jff.2012.07.001

[View at Publisher](#)
-

- 10 Ambigaipalan, P., De Camargo, A.C., Shahidi, F.
Phenolic Compounds of Pomegranate Byproducts (Outer Skin, Mesocarp, Divider Membrane) and Their Antioxidant Activities
(2016) *Journal of Agricultural and Food Chemistry*, 64 (34), pp. 6584-6604. Cited 86 times.
<http://pubs.acs.org/journal/jafcau>
doi: 10.1021/acs.jafc.6b02950
[View at Publisher](#)
-
- 11 Ayala-Zavala, J.F., Vega-Vega, V., Rosas-Domínguez, C., Palafox-Carlos, H., Villa-Rodríguez, J.A., Siddiqui, M.W., Dávila-Aviña, J.E., (...), González-Aguilar, G.A.
Agro-industrial potential of exotic fruit byproducts as a source of food additives
(2011) *Food Research International*, 44 (7), pp. 1866-1874. Cited 271 times.
doi: 10.1016/j.foodres.2011.02.021
[View at Publisher](#)
-
- 12 Azrina, A., Aznira, A.R., Khoo, H.E.
Chemical properties and fatty acid composition of *Mangifera pajang* and *Mangifera indica* kernel fats
(2016) *Malaysian Journal of Nutrition*, 21 (3), pp. 355-363. Cited 5 times.
http://www.nutriweb.org.my/publications/mjn0021_3/8%20MJN%20Dec%202015%20Azrina.pdf
-
- 13 Bakar, M.F.A., Fry, J.R.
A review on underutilized indigenous bambangan (*Mangifera pajang*) fruit as a potential novel source for functional food and medicine
(2013) *Journal of Medicinal Plants Research*, 7 (45), pp. 3292-3297. Cited 9 times.
-
- 14 Bakar, M.F.A., Mohamed, M., Rahmat, A., Burr, S.A., Fry, J.R.
Cytotoxicity and polyphenol diversity in selected parts of *Mangifera pajang* and *Artocarpus odoratissimus* fruits
(2010) *Nutrition and Food Science*, 40 (1), pp. 29-38. Cited 18 times.
doi: 10.1108/00346651011015890
[View at Publisher](#)
-
- 15 Abu Bakar, M.F., Mohamad, M., Rahmat, A., Burr, S.A., Fry, J.R.
Cytotoxicity, cell cycle arrest, and apoptosis in breast cancer cell lines exposed to an extract of the seed kernel of *Mangifera pajang* (bambangan)
(2010) *Food and Chemical Toxicology*, 48 (6), pp. 1688-1697. Cited 56 times.
doi: 10.1016/j.fct.2010.03.046
[View at Publisher](#)
-
- 16 Abu Bakar, M.F., Mohamed, M., Rahmat, A., Burr, S.A., Fry, J.R.
Cellular assessment of the extract of bambangan (*Mangifera pajang*) as a potential cytoprotective agent for the human hepatocellular HepG2 cell line
(2013) *Food Chemistry*, 136 (1), pp. 18-25. Cited 10 times.
doi: 10.1016/j.foodchem.2012.07.099
[View at Publisher](#)
-
- 17 Abu Bakar, M.F., Mohamed, M., Rahmat, A., Fry, J.
Phytochemicals and antioxidant activity of different parts of bambangan (*Mangifera pajang*) and tarap (*Artocarpus odoratissimus*)
(2009) *Food Chemistry*, 113 (2), pp. 479-483. Cited 255 times.
doi: 10.1016/j.foodchem.2008.07.081
[View at Publisher](#)

- 18 Boivin, D., Lamy, S., Lord-Dufour, S., Jackson, J., Beaulieu, E., Côté, M., Moghrabi, A., (...), Béliveau, R.
Antiproliferative and antioxidant activities of common vegetables: A comparative study
(2009) *Food Chemistry*, 112 (2), pp. 374-380. Cited 92 times.
doi: 10.1016/j.foodchem.2008.05.084
[View at Publisher](#)
-
- 19 Cano, M.P., de Acnos, B.
Carotenoid and Carotenoid Ester Composition in Mango Fruit As Influenced by Processing Method
(1994) *Journal of Agricultural and Food Chemistry*, 42 (12), pp. 2737-2742. Cited 57 times.
doi: 10.1021/jf00048a017
[View at Publisher](#)
-
- 20 Carocho, M., Ferreira, I.C.F.R.
A review on antioxidants, prooxidants and related controversy: Natural and synthetic compounds, screening and analysis methodologies and future perspectives
(2013) *Food and Chemical Toxicology*, 51 (1), pp. 15-25. Cited 783 times.
doi: 10.1016/j.fct.2012.09.021
[View at Publisher](#)
-
- 21 Chau, C.-F., Huang, Y.-L.
Comparison of the chemical composition and physicochemical properties of different fibers prepared from the peel of citrus sinensis L. Cv. Liucheng
(2003) *Journal of Agricultural and Food Chemistry*, 51 (9), pp. 2615-2618. Cited 258 times.
doi: 10.1021/jf025919b
[View at Publisher](#)
-
- 22 Chen, G.-L., Chen, S.-G., Zhao, Y.-Y., Luo, C.-X., Li, J., Gao, Y.-Q.
Total phenolic contents of 33 fruits and their antioxidant capacities before and after in vitro digestion
(2014) *Industrial Crops and Products*, 57, pp. 150-157. Cited 88 times.
www.elsevier.com/inca/publications/store/5/2/2/8/2/5
doi: 10.1016/j.indcrop.2014.03.018
[View at Publisher](#)
-
- 23 Chen, J.P., Tai, C.Y., Chen, B.H.
Improved liquid chromatographic method for determination of carotenoids in Taiwanese mango (*Mangifera indica* L.)
(2004) *Journal of Chromatography A*, 1054 (1-2), pp. 261-268. Cited 89 times.
doi: 10.1016/j.chroma.2004.08.100
[View at Publisher](#)
-
- 24 de Moraes Crizel, T., Hermes, V.S., de Oliveira Rios, A., Flôres, S.H.
Evaluation of bioactive compounds, chemical and technological properties of fruits byproducts powder
(2016) *Journal of Food Science and Technology*, 53 (11), pp. 4067-4075. Cited 13 times.
<http://www.springerlink.com/content/121580/>
doi: 10.1007/s13197-016-2413-7
[View at Publisher](#)
-

- 25 Department of Agriculture
Fruit crops statistic Malaysia
(2015) . Cited 2 times.
Department of Agriculture Putrajaya
-
- 26 Ekop, S.A., Etuk, B.A., Eddy, N.O.
Effect of some local additives on the chemical constituent of palm oil
(2007) *Journal of Applied Science and Environmental Management*, 11 (1), pp. 85-89. Cited 6 times.
-
- 27 Enweremadu, C.C., Alamu, O.J.
Development and characterization of biodiesel from shea nut butter

(2010) *International Agrophysics*, 24 (1), pp. 29-34. Cited 28 times.
http://www.international-agrophysics.org/artykuly/international_agrophysics/IntAgr_2010_24_1_29.pdf
-
- 28 Firestone, D.
Physical and chemical characteristics of oils, fats, and waxes
(1999) . Cited 232 times.
AOCS Champaign
-
- 29 Gordon, M.H.
The development of oxidative rancidity in foods
(2001) *Antioxidant in food: Practical applications*, p. 17. Cited 104 times.
J. Pokorny N. Yanishlieva M. Gordon Woodhead Publishing Limited Cambridge
-
- 30 Gunstone, F.D.
Vegetable Oils in Food Technology: Composition, Properties and Uses, Second Edition

(2011) *Vegetable Oils in Food Technology: Composition, Properties and Uses, Second Edition*. Cited 190 times.
<http://onlinelibrary.wiley.com/book/10.1002/9781444339925>
ISBN: 978-144433268-1
doi: 10.1002/9781444339925

View at Publisher
-
- 31 Guo, C., Yang, J., Wei, J., Li, Y., Xu, J., Jiang, Y.
Antioxidant activities of peel, pulp and seed fractions of common fruits as determined by FRAP assay

(2003) *Nutrition Research*, 23 (12), pp. 1719-1726. Cited 478 times.
www.elsevier.com/locate/nutres
doi: 10.1016/j.nutres.2003.08.005

View at Publisher
-
- 32 Halliwell, B., Gutteridge, J.M.C.
The definition and measurement of antioxidants in biological systems

(1995) *Free Radical Biology and Medicine*, 18 (1), pp. 125-126. Cited 315 times.
doi: 10.1016/0891-5849(95)91457-3

View at Publisher
-
- 33 Haron, H., Said, M.
Determination of the nutrient and anti-nutrient contents in seed kernel of *Mangifera pajang* kostermans
(2004) *Malaysian Journal of Health Science*, 2 (2), pp. 1-11. Cited 2 times.
-

- 34 Hassan, F.A., Ismail, A., Abdulhamid, A., Azlan, A.
Identification and quantification of phenolic compounds in bambangan (*Mangifera pajang* kort.) Peels and their free radical scavenging activity
(2011) *Journal of Agricultural and Food Chemistry*, 59 (17), pp. 9102-9111. Cited 28 times.
doi: 10.1021/jf201270n
View at Publisher
-
- 35 Hassan, F.A., Ismail, A., Hamid, A.A., Azlan, A., Al-Sheraji, S.H.
Characterisation of fibre-rich powder and antioxidant capacity of *Mangifera pajang* K. fruit peels
(2011) *Food Chemistry*, 126 (1), pp. 283-288. Cited 46 times.
doi: 10.1016/j.foodchem.2010.11.019
View at Publisher
-
- 36 Hymavathi, T.V., Khader, V.
Carotene, ascorbic acid and sugar content of vacuum dehydrated ripe mango powders stored in flexible packaging material
(2005) *Journal of Food Composition and Analysis*, 18 (2-3), pp. 181-192. Cited 49 times.
doi: 10.1016/j.jfca.2004.03.028
View at Publisher
-
- 37 Ibrahim, M., Nagendra Prasad, K., Ismail, A., Azlan, A., Hamid, A.A.
Physiochemical composition and antioxidant activities of underutilized *Mangifera pajang* fruit
(2010) *African Journal of Biotechnology*, 9 (28), pp. 4392-4397. Cited 25 times.
<http://www.academicjournals.org/AJB/PDF/pdf2010/12Jul/Ibrahim%20et%20al%202.pdf>
View at Publisher
-
- 38 Indap, M.A., Radhika, S., Motiwale, L., Rao, K.V.K.
Anticancer activity of phenolic antioxidants against breast cancer cells and a spontaneous mammary tumor
(2006) *Indian Journal of Pharmaceutical Sciences*, 68 (4), pp. 470-474. Cited 21 times.
<http://www.ijpsonline.com/>
doi: 10.4103/0250-474x.27820
View at Publisher
-
- 39 Jahurul, M.H.A., Zaidul, I.S.M., Norulaini, N.A.N., Sahena, F., Jinap, S., Azmir, J., Sharif, K.M., (...), Mohd Omar, A.K.
Cocoa butter fats and possibilities of substitution in food products concerning cocoa varieties, alternative sources, extraction methods, composition, and characteristics
(2013) *Journal of Food Engineering*, 117 (4), pp. 467-476. Cited 74 times.
<http://www.sciencedirect.com/science/journal/02608774>
doi: 10.1016/j.jfoodeng.2012.09.024
View at Publisher
-
- 40 Jahurul, M.H.A., Zaidul, I.S.M., Nik Norulaini, N.A., Sahena, F., Kamaruzzaman, B.Y., Ghafoor, K., Omar, A.K.M.
Cocoa butter replacers from blends of mango seed fat extracted by supercritical carbon dioxide and palm stearin
(2014) *Food Research International*, 65 (PC), pp. 401-406. Cited 25 times.
www.elsevier.com/inca/publications/store/4/2/2/9/7/0
doi: 10.1016/j.foodres.2014.06.039
View at Publisher

- 41 Jahurul, M.H.A., Zaidul, I.S.M., Nik Norulaini, N.A., Sahena, F., Abedin, M.Z., Mohamed, A., Mohd Omar, A.K.

Hard cocoa butter replacers from mango seed fat and palm stearin

(2014) *Food Chemistry*, 154, pp. 323-329. Cited 42 times.

www.elsevier.com/locate/foodchem

doi: 10.1016/j.foodchem.2013.11.098

[View at Publisher](#)

- 42 Akanda, M.J.H., Sarker, M.Z.I., Norulaini, N., Ferdosh, S., Rahman, M.M., Omar, A.K.M.

Optimization of supercritical carbon dioxide extraction parameters of cocoa butter analogy fat from mango seed kernel oil using response surface methodology

(2015) *Journal of Food Science and Technology*, 52 (1), pp. 319-326. Cited 15 times.

<http://www.springerlink.com/content/121580/>

doi: 10.1007/s13197-013-0979-x

[View at Publisher](#)

- 43 Jahurul, M.H.A., Zaidul, I.S.M., Norulaini, N.N.A., Sahena, F., Jaffri, J.M., Omar, A.K.M.

Supercritical carbon dioxide extraction and studies of mango seed kernel for cocoa butter analogy fats

(2014) *CYTA - Journal of Food*, 12 (1), pp. 97-103. Cited 29 times.

<http://www.tandf.co.uk/journals/journal.asp?issn=1947-6337&linktype=2>

doi: 10.1080/19476337.2013.801038

[View at Publisher](#)

- 44 Jahurul, M.H.A., Leykey, B., Sharifudin, M.S., Hasmadi, M., Zaidul, I.S.M., Jinap, S., Ali, M.E., (...), Omar, A.K.M.

Optimization of fat yield of bambangan (*Mangifera pajang*) kernel using response surface methodology and its antioxidant activities

(2018) *Journal of Food Measurement and Characterization*, 12 (2), pp. 1427-1438. Cited 4 times.

<http://rd.springer.com/journal/11694>

doi: 10.1007/s11694-018-9758-8

[View at Publisher](#)

- 45 Jahurul, M.H.A., Soon, Y., Shaarani Sharifudin, M., Hasmadi, M., Mansoor, A.H., Zaidul, I.S.M., Lee, J.S., (...), Jinap, S.

Bambangan (*Mangifera pajang*) kernel fat: a potential new source of cocoa butter alternative

(2018) *International Journal of Food Science and Technology*, 53 (7), pp. 1689-1697. Cited 7 times.

[http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1365-2621](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1365-2621)

doi: 10.1111/ijfs.13753

[View at Publisher](#)

- 46 Jatto, W.O., Yuanfa, L., Shan, L., Wang, X., Aworh, O.C.

Liquid-gas chromatographic analysis of fatty acid content of south-western Nigerian shea butter (*Vitellera paradoxum*)

(2010) *Electronic Journal of Environmental, Agricultural and Food Chemistry*, 9 (2), pp. 358-363. Cited 4 times.

http://ejefache.uvigo.es/component?option=com_docman/task/doc_download/gid,611/Itemid,33/

[View at Publisher](#)

- 47 Jeyarani, T., Reddy, S.Y.

Effect of enzymatic interesterification on physicochemical properties of mahua oil and kokum fat blend

(2010) *Food Chemistry*, 123 (2), pp. 249-253. Cited 28 times.

doi: 10.1016/j.foodchem.2010.04.019

[View at Publisher](#)

- 48 Jiménez-Escrig, A., Rincón, M., Pulido, R., Saura-Calixto, F.
Guava fruit (*Psidium guajava* L.) as a new source of antioxidant dietary fiber

(2001) *Journal of Agricultural and Food Chemistry*, 49 (11), pp. 5489-5493. Cited 319 times.
doi: 10.1021/jf010147p

[View at Publisher](#)

- 49 Ju, E.M., Lee, S.E., Hwang, H.J., Kim, J.H.
Antioxidant and anticancer activity of extract from *Betula platyphylla* var. *japonica*

(2004) *Life Sciences*, 74 (8), pp. 1013-1026. Cited 74 times.

www.elsevier.com/locate/lifescie

doi: 10.1016/j.lfs.2003.07.025

[View at Publisher](#)

- 50 Kalsum, H.Z.U., Mirfat, A.H.S.
Proximate composition of Malaysian underutilised fruits
(2014) *Journal of Tropical Agriculture and Food Science*, 42 (1), pp. 63-72. Cited 5 times.

- 51 Kamalakar, K., Sai Manoj, G.N.V.T., Prasad, R.B.N., Karuna, M.S.L.
Influence of structural modification on lubricant properties of sal fat-based lubricant base stocks

(2015) *Industrial Crops and Products*, 76, pp. 456-466. Cited 13 times.

www.elsevier.com/inca/publications/store/5/2/2/8/2/5

doi: 10.1016/j.indcrop.2015.07.050

[View at Publisher](#)

- 52 Khoo, H.-E., Prasad, K.N., Ismail, A., Mohd-Esa, N.
Carotenoids from mangifera pajang and their antioxidant capacity ([Open Access](#))

(2010) *Molecules*, 15 (10), pp. 6699-6712. Cited 16 times.

<http://www.mdpi.com/1420-3049/15/10/6699/pdf>

doi: 10.3390/molecules15106699

[View at Publisher](#)

- 53 Lim, T.K.
Edible medicinal and non-medicinal plants

(2012) *Edible Medicinal and Non-Medicinal Plants*, pp. 1-738. Cited 185 times.

<http://dx.doi.org/10.1007/978-90-481-8661-7>

ISBN: 978-904818661-7; 978-904818660-0

doi: 10.1007/978-90-481-8661-7

[View at Publisher](#)

- 54 Lin, J.-T., Liu, S.-C., Hu, C.-C., Shyu, Y.-S., Hsu, C.-Y., Yang, D.-J.
Effects of roasting temperature and duration on fatty acid composition, phenolic composition, Maillard reaction degree and antioxidant attribute of almond (*Prunus dulcis*) kernel

(2016) *Food Chemistry*, 190, pp. 520-528. Cited 64 times.

www.elsevier.com/locate/foodchem

doi: 10.1016/j.foodchem.2015.06.004

[View at Publisher](#)

- 55 López-Vargas, J.H., Fernández-López, J., Pérez-Álvarez, J.A., Viuda-Martos, M.
Chemical, Physico-chemical, Technological, Antibacterial and antioxidant properties of dietary fiber powder obtained from yellow passion fruit (*Passiflora edulis* var. *flavicarpa*) co-products
(2013) *Food Research International*, 51 (2), pp. 756-763. Cited 104 times.
doi: 10.1016/j.foodres.2013.01.055
[View at Publisher](#)
-
- 56 Lorenzo, J.M., González-Rodríguez, R.M., Sánchez, M., Amado, I.R., Franco, D.
Effects of natural (grape seed and chestnut extract) and synthetic antioxidants (butylatedhydroxytoluene, BHT) on the physical, chemical, microbiological and sensory characteristics of dry cured sausage "chorizo"
(2013) *Food Research International*, 54 (1), pp. 611-620. Cited 89 times.
doi: 10.1016/j.foodres.2013.07.064
[View at Publisher](#)
-
- 57 Maisuthisakul, P., Gordon, M.H.
Antioxidant and tyrosinase inhibitory activity of mango seed kernel by product
(2009) *Food Chemistry*, 117 (2), pp. 332-341. Cited 120 times.
doi: 10.1016/j.foodchem.2009.04.010
[View at Publisher](#)
-
- 58 Mamiro, P., Fweja, L., Chove, B., Kinabo, J., George, V., Mtebe, K.
Physical and chemical characteristics of off vine ripened mangoes (*Mangifera indica* L.) fruit (Dodo)
(2007) *African Journal of Biotechnology*, 7, pp. 65-72. Cited 3 times.
-
- 59 Manthey, J.A., Guthrie, N.
Antiproliferative activities of citrus flavonoids against six human cancer cell lines
(2002) *Journal of Agricultural and Food Chemistry*, 50 (21), pp. 5837-5843. Cited 277 times.
doi: 10.1021/jf020121d
[View at Publisher](#)
-
- 60 Martínez, R., Torres, P., Meneses, M.A., Figueroa, J.G., Pérez-Álvarez, J.A., Viuda-Martos, M.
Chemical, technological and in vitro antioxidant properties of cocoa (*Theobroma cacao* L.) co-products
(2012) *Food Research International*, 49 (1), pp. 39-45. Cited 64 times.
doi: 10.1016/j.foodres.2012.08.005
[View at Publisher](#)
-
- 61 Masibo, M., Qian, H.
Major mango polyphenols and their potential significance to human health
(2008) *Comprehensive Reviews in Food Science and Food Safety*, 7 (4), pp. 309-319. Cited 203 times.
doi: 10.1111/j.1541-4337.2008.00047.x
[View at Publisher](#)
-
- 62 Muchiri, D.R., Mahungu, S.M., Gituanja, S.N.
Studies on mango (*Mangifera indica*, L.) kernel fat of some Kenyan varieties in Meru
(2012) *JAOCs, Journal of the American Oil Chemists' Society*, 89 (9), pp. 1567-1575. Cited 39 times.
doi: 10.1007/s11746-012-2054-6
[View at Publisher](#)
-

- 63 Mukherjee, A.K., Basu, S., Sarkar, N., Ghosh, A.C.
Advances in cancer therapy with plant based natural products
(2001) *Current Medicinal Chemistry*, 8 (12), pp. 1467-1486. Cited 297 times.
<http://www.benthamscience.com/contents-JCode-CMC-Vol-00000019-Iss-00000006.htm>
doi: 10.2174/0929867013372094
[View at Publisher](#)
-
- 64 Müller, L., Gnoyke, S., Popken, A.M., Böhm, V.
Antioxidant capacity and related parameters of different fruit formulations
(2010) *LWT - Food Science and Technology*, 43 (6), pp. 992-999. Cited 74 times.
doi: 10.1016/j.lwt.2010.02.004
[View at Publisher](#)
-
- 65 Noratto, G., Porter, W., Byrne, D., Cisneros-Zevallos, L.
Identifying peach and plum polyphenols with chemopreventive potential against estrogen-independent breast cancer cells
(2009) *Journal of Agricultural and Food Chemistry*, 57 (12), pp. 5219-5226. Cited 104 times.
<http://pubs.acs.org/doi/pdfplus/10.1021/jf900259m>
doi: 10.1021/jf900259m
[View at Publisher](#)
-
- 66 Okullo, J.B.L., Omujaal, F., Agea, J.G., Vuzi, P.C., Namutebi, A., Okello, J.B.A., Nyanzi, S.A.
Physico-chemical characteristics of shea butter (*Vitellaria paradoxa* C.F. Gaertn.) oil from the shea districts of Uganda
(2010) *Africa Journal of Food, Agriculture and Nutrition Development*, 10, pp. 2070-2084. Cited 24 times.
-
- 67 Omena, C.M.B., Valentim, I.B., Guedes, G.D.S., Rabelo, L.A., Mano, C.M., Bechara, E.J.H., Sawaya, A.C.H.F., (...), Goulart, M.O.F.
Antioxidant, anti-acetylcholinesterase and cytotoxic activities of ethanol extracts of peel, pulp and seeds of exotic Brazilian fruits. Antioxidant, anti-acetylcholinesterase and cytotoxic activities in fruits. ([Open Access](#))
(2012) *Food Research International*, 49 (1), pp. 334-344. Cited 41 times.
doi: 10.1016/j.foodres.2012.07.010
[View at Publisher](#)
-
- 68 Ongphimai, N., Lilitchan, S., Aryasuk, K., Bumrungpert, A., Krisnangkura, K.
Phenolic acids content and antioxidant capacity of fruit extracts from Thailand
(2013) *Chiang Mai Journal of Science*, 40 (4), pp. 636-642. Cited 18 times.
http://it.science.cmu.ac.th/ejournal/dl.php?journal_id=4331
-
- 69 Opie, L.H., Lecour, S.
The red wine hypothesis: From concepts to protective signalling molecules
([Open Access](#))
(2007) *European Heart Journal*, 28 (14), pp. 1683-1693. Cited 241 times.
doi: 10.1093/eurheartj/ehm149
[View at Publisher](#)
-
- 70 Padilla, F.C., Liendo, R., Quintana, A.
Characterization of cocoa butter extracted from hybrid cultivars of *Theobroma cacao* L
(2000) *Archivos Latinoamericanos de Nutricion*, 50 (2), pp. 200-205. Cited 14 times.
[View at Publisher](#)

71 Park, Y.-S., Im, M.H., Ham, K.-S., Kang, S.-G., Park, Y.-K., Namiesnik, J., Leontowicz, H., (...), Gorinstein, S.

Quantitative assessment of the main antioxidant compounds, antioxidant activities and FTIR spectra from commonly consumed fruits, compared to standard kiwi fruit

(2015) *LWT - Food Science and Technology*, 63 (1), pp. 346-352. Cited 26 times.
<http://www.elsevier.com/locate/jfoodchem/store/6/2/2/9/1/0/index.htm>
doi: 10.1016/j.lwt.2015.03.057

[View at Publisher](#)

72 Peerajit, P., Chiewchan, N., Devahastin, S.

Effects of pretreatment methods on health-related functional properties of high dietary fibre powder from lime residues

(2012) *Food Chemistry*, 132 (4), pp. 1891-1898. Cited 91 times.
doi: 10.1016/j.foodchem.2011.12.022

[View at Publisher](#)

73 Prasad, K.N., Hassan, F.A., Yang, B., Kong, K.W., Ramanan, R.N., Azlan, A., Ismail, A.

Response surface optimisation for the extraction of phenolic compounds and antioxidant capacities of underutilised *Mangifera pajang* Kosterm. peels

(2011) *Food Chemistry*, 128 (4), pp. 1121-1127. Cited 118 times.
doi: 10.1016/j.foodchem.2011.03.105

[View at Publisher](#)

74 Prasad, N.N., Siddalingaswamy, M., Parameswariah, P.M., Radhakrishna, K., Rao, R.V., Viswanathan, K.R., Santhanam, K.

Proximate and mineral composition of some processed traditional and popular Indian dishes

(2000) *Food Chemistry*, 68 (1), pp. 87-94. Cited 15 times.
doi: 10.1016/S0308-8146(99)00168-5

[View at Publisher](#)

75 Proteggente, A.R., Pannala, A.S., Paganga, G., Van Buren, L., Wagner, E., Wiseman, S., Van De Put, F., (...), Rice-Evans, C.A.

The antioxidant activity of regularly consumed fruit and vegetables reflects their phenolic and vitamin C composition

(2002) *Free Radical Research*, 36 (2), pp. 217-233. Cited 577 times.
doi: 10.1080/10715760290006484

[View at Publisher](#)

76 Raju, V.K., Reni, M.

Kokam and cambodge

(2001) *Handbook of herbs and spices*, pp. 207-215. Cited 8 times.
K.V. Peter Woodhead Publishing Limited Cambridge

77 Rodriguez-Amaya, D.B., Kimura, M., Godoy, H.T., Amaya-Farfan, J.

Updated Brazilian database on food carotenoids: Factors affecting carotenoid composition

(2008) *Journal of Food Composition and Analysis*, 21 (6), pp. 445-463. Cited 199 times.
doi: 10.1016/j.jfca.2008.04.001

[View at Publisher](#)

- 78 Roiaini, M., Seyed, H.M., Jinap, S., Norhayati, H.
Effect of extraction methods on yield, oxidative value, phytosterols and antioxidant content of cocoa butter

(2016) *International Food Research Journal*, 23 (1), pp. 47-54. Cited 9 times.
[http://www.ifrj.upm.edu.my/23%20\(01\)%202016/\(8\).pdf](http://www.ifrj.upm.edu.my/23%20(01)%202016/(8).pdf)

- 79 Rotta, E.M., Haminiuk, C.W.I., Maldaner, L., Visentainer, J.V.
Determination of antioxidant activity and phenolic compounds of *Muntingia calabura* Linn. peel by HPLC-DAD and UPLC-ESI-MS/MS

(2017) *International Journal of Food Science and Technology*, 52 (4), pp. 954-963. Cited 11 times.
doi: 10.1111/ijfs.13359

[View at Publisher](#)

- 80 Rukayah, A.
Buah buahan Malaysia
(1999) . Cited 2 times.
Dewan Bahasa dan Pustaka (Bahasa Malaysia) Kuala Lumpur

🔍 Jahurul, M.H.A.; Faculty of Food Science and Nutrition, Universiti Malaysia Sabah, Kota Kinabalu, Sabah, Malaysia;
email:jahurul@ums.edu.my

© Copyright 2019 Elsevier B.V., All rights reserved.

[← Back to results](#) | [← Previous](#) 3 of 3

[^ Top of page](#)

About Scopus

[What is Scopus](#)
[Content coverage](#)
[Scopus blog](#)
[Scopus API](#)
[Privacy matters](#)

Language

[日本語に切り替える](#)
[切换到简体中文](#)
[切换到繁體中文](#)
[Русский язык](#)

Customer Service

[Help](#)
[Contact us](#)

ELSEVIER

[Terms and conditions ↗](#) [Privacy policy ↗](#)

Copyright © Elsevier B.V. All rights reserved. Scopus® is a registered trademark of Elsevier B.V.

We use cookies to help provide and enhance our service and tailor content. By continuing, you agree to the use of cookies.

 RELX