Scopus

Document details

Back to results | 1 of 1

Export Download Print E-mail Save to PDF Add to List More...

Full Text View at Publisher

Natural Products Journal
Volume 9, Issue 1, 2019, Pages 14-25

Biological activities and extraction technologies of Pheonix dactylifera : A review (Review)

Hamzah, N.N.[a], Ferdosh, S.[a], Sarker, M.Z.I.[b], Ghafoor, K.[c], Yunus, K.[d], Chowdhury, A.J.K.[d], Bari, N.A.A.[a]

[a]Department of Plant Science, Faculty of Science, International Islamic University Malaysia (IIUM), Kuantan, Pahang, Malaysia
[b]Faculty of Pharmacy, International Islamic University Malaysia, Kuantan, Pahang, Malaysia
[c]Department of Food and Nutrition Sciences, King Saud University, Riyadh, Saudi Arabia

View additional affiliations

Abstract

View references (74)

Date palm (Pheonix dactylifera L.) has long been known for its medical benefits. In this review , the therapeutic properties of P. dactylifera are presented in light of the analysis of huge past reviews that reported the bioactivities of both flesh and seed of this fruit. The reported bioactivities of P. dactylifera included antioxidants, anti-cancer, aphrodisiac, antimicrobial, and anti-diabetic properties. This review additionally highlights the extraction technologies (Soxhlet, maceration, heat under reflux, Supercritical Fluid Extraction (SFE) and microwave assisted extraction) that were utilized as part of the extraction of P. dactylifera . This is because the quality and amount of the extraction yield depend on the extraction technology used. Accordingly, this review aims for underlining the potentials of P. dactylifera by compiling available data on the bioactivities and extraction technologies used to set the directions for the improvement of future research of this fruit. © 2019 Bentham Science Publishers.

SciVal Topic Prominence

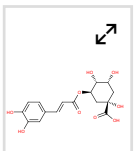
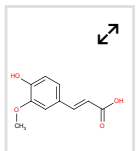
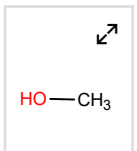
Topic: Phoenix dactylifera | Fruit | Palm fruits

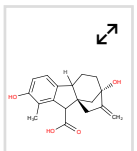
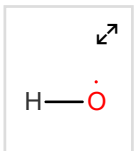
Prominence percentile: 89.044

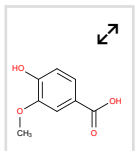
Chemistry database information

Substances

View all substances (15)



Author keywords

Anti-cancer | Anti-diabetic | Antimicrobial | Antioxidants | Aphrodisiac | Bioactivity | Extraction technologies | Pheonix dactylifera L. | Supercritical fluid extraction

Indexed keywords

EMTREE drug terms: antidiabetic agent | antiinfective agent | antimutagenic agent | antineoplastic agent | antioxidant | aphrodisiac agent | herbaceous agent

Metrics

PlumX Metrics
Usage, Captures, Mentions, Social Media and Citations beyond Scopus.

Cited by 0 documents

Inform me when this document is cited in Scopus:

Set citation alert >
Set citation feed >

Related documents

Therapeutic effects of date fruits (Phoenix dactylifera) in the prevention of diseases via modulation of anti-inflammatory, anti-oxidant and anti-tumour activity
Rahmani, A.H. , Aly, S.M. , Ali, H.
(2014) International Journal of Clinical and Experimental Medicine

Date palm tree (Phoenix dactylifera L.): Natural products and therapeutic options
Al-Alawi, R. , Al-Mashiqri, J.H. , Al-Nadabi, J.S.M.
(2017) Frontiers in Plant Science

Phoenix dactylifera Linn.(PIND KHARJURA): A review
Ateeq, A. , Sunil, S.D. , Varun, S.K.
(2013) International Journal of Research in Ayurveda and Pharmacy

View all related documents based on references

Find more related documents in Scopus based on:

Authors > Keywords >

EMTREE medical terms:

antidiabetic activity | antimicrobial activity | antimutagenic activity | antineoplastic activity | antioxidant activity | biological activity | chemical composition | date (fruit) | drug isolation | extraction | heat under reflux extraction | human | maceration extraction | microwave assisted extraction | nonhuman | Pheonix dactylifera | plant seed | priority journal | Review | Soxhlet extraction | supercritical fluid extraction

ISSN: 22103155
Source Type: Journal
Original language: English
DOI: 10.2174/2210315508666180327152800
Document Type: Review
Publisher: Bentham Science Publishers B.V.

References (74)

View in search results format >

All | Export | Print | E-mail | Save to PDF | Create bibliography

1 Al Juhaimi, F., Ghafoor, K., Özcan, M.M.
Physicochemical properties and mineral contents of seven different date fruit (Phoenix dactylifera L.) varieties growing from Saudi Arabia
(2014) *Environmental Monitoring and Assessment*, 186 (4), pp. 2165-2170. Cited 12 times.
www.wkap.nl/journalhome.htm/0167-6369
doi: 10.1007/s10661-013-3526-3
View at Publisher

2 Rahmani, A.H., Aly, S.M., Ali, H., Babiker, A.Y., Suikar, S., Khan, A.A.
Therapeutic effects of date fruits (Phoenix dactylifera) in the prevention of diseases via modulation of anti-inflammatory, anti-oxidant and anti-tumour activity
(2014) *International Journal of Clinical and Experimental Medicine*, 7 (3), pp. 483-491. Cited 70 times.
http://www.ijcem.com/files/ijcem1401053.pdf

3 Mohammed, S., Shabana, H.R., Mawlod, K.A.
Evaluation and identification of Iraqi date cultivars: Fruit characteristics of fifty cultivars
(1983) *Date Palm J*, 21 (1), pp. 27-55. Cited 25 times.

4 Ahmed, I.A., Robinson, R.K.
The ability of date extracts to support the production of aflatoxins
(1999) *Food Chemistry*, 66 (3), pp. 307-312. Cited 19 times.
doi: 10.1016/S0308-8146(99)00061-8
View at Publisher

5 Baliga, M.S., Baliga, B.R.V., Kandathil, S.M., Bhat, H.P., Vayalil, P.K.
A review of the chemistry and pharmacology of the date fruits (Phoenix dactylifera L.)
(2011) *Food Research International*, 44 (7), pp. 1812-1822. Cited 165 times.
doi: 10.1016/j.foodres.2010.07.004
View at Publisher

6 Chao, C.T., Krueger, R.R.
The date palm (Phoenix dactylifera L.): Overview of biology, uses, and cultivation
(2007) *HortScience*, 42 (5), pp. 1077-1082. Cited 180 times.
View at Publisher

7 Parle, M., Khanna, D.
Phytopharmacology of Khajur (Phoenix dactylifera L
(2010) *Ann. Pharm. Pharmaceutic. Sci.*, 1 (2), pp. 109-115.

8 Ahmed, I.A., Ahmed, A.W.K., Robinson, R.K.
Chemical composition of date varieties as influenced by the stage of ripening
(1995) *Food Chemistry*, 54 (3), pp. 305-309. Cited 144 times.
doi: 10.1016/0308-8146(95)00051-J
View at Publisher

9 Benmeddour, Z., Mehinagic, E., Meurlay, D.L., Louaileche, H.
Phenolic composition and antioxidant capacities of ten Algerian date (Phoenix dactylifera L.) cultivars: A comparative study
(2013) *Journal of Functional Foods*, 5 (1), pp. 346-354. Cited 56 times.
doi: 10.1016/j.jff.2012.11.005
View at Publisher

10 Al Harthi, S.S., Mavazhe, A., Al Mahroqi, H., Khan, S.A.
Quantification of phenolic compounds, evaluation of physicochemical properties and antioxidant activity of four date (Phoenix dactylifera L.) varieties of Oman (Open Access)
(2015) *Journal of Taibah University Medical Sciences*, 10 (3), art. no. 154, pp. 346-352. Cited 19 times.
http://www.elsevier.com/journals/journal-of-taibah-university-medical-sciences/1658-3612
doi: 10.1016/j.jtumed.2014.12.006
View at Publisher

11 Food and Agriculture Organization of the United Nations Statistic Division
(2015) *FAOSTAT*
(Accessed October 1, 2016)
http://faostat3.fao.org/compare/E

12 Easmin, M.S., Sarker, M.Z.I., Ferdosh, S., Shamsudin, S.H., Yunus, K.B., Uddin, M.S., Sarker, M.M.R., (...), Khalil, H.P.S.A.
Bioactive compounds and advanced processing technology: Phaleria macrocarpa (sheff.) Boerl, a review
(2015) *Journal of Chemical Technology and Biotechnology*, 90 (6), pp. 981-991. Cited 13 times.
http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1097-4660
doi: 10.1002/jctb.4603
View at Publisher

13 Ghasemi, E., Raofie, F., Najafi, N.M.
Application of response surface methodology and central composite design for the optimisation of supercritical fluid extraction of essential oils from Myrtus communis L. leaves
(2011) *Food Chemistry*, 126 (3), pp. 1449-1453. Cited 55 times.
doi: 10.1016/j.foodchem.2010.11.135
View at Publisher

14 Wang, L., Weller, C.L.
Recent advances in extraction of nutraceuticals from plants
(2006) *Trends in Food Science and Technology*, 17 (6), pp. 300-312. Cited 984 times.
doi: 10.1016/j.tifs.2005.12.004
View at Publisher

15 Sasidharan, S., Chen, Y., Saravanan, D., Sundram, K.M., Yoga Latha, L.
Extraction, isolation and characterization of bioactive compounds from plants' extracts

(2011) *African Journal of Traditional, Complementary and Alternative Medicines*, 8 (1), pp. 1-10. Cited 292 times.
http://www.bioline.org.br/pdf?tc11001

View at Publisher

16 Al-Farsi, M., Alasalvar, C., Morris, A., Baron, M., Shahidi, F.
Comparison of antioxidant activity, anthocyanins, carotenoids, and phenolics of three native fresh and sun-dried date (Phoenix dactylifera L.) varieties grown in Oman

(2005) *Journal of Agricultural and Food Chemistry*, 53 (19), pp. 7592-7599. Cited 263 times.
doi: 10.1021/jf050579q

View at Publisher

17 Al-Farsi, M., Alasalvar, C., Al-Abid, M., Al-Shoaily, K., Al-Amry, M., Al-Rawahy, F.
Compositional and functional characteristics of dates, syrups, and their by-products

(2007) *Food Chemistry*, 104 (3), pp. 943-947. Cited 223 times.
doi: 10.1016/j.foodchem.2006.12.051

View at Publisher

18 Al-Farsi, M.A., Lee, C.Y.
Nutritional and functional properties of dates: A review

(2008) *Critical Reviews in Food Science and Nutrition*, 48 (10), pp. 877-887. Cited 200 times.
doi: 10.1080/10408390701724264

View at Publisher

19 Elleuch, M., Besbes, S., Roiseux, O., Blecker, C., Deroanne, C., Drira, N.-E., Attia, H.
Date flesh: Chemical composition and characteristics of the dietary fibre

(2008) *Food Chemistry*, 111 (3), pp. 676-682. Cited 151 times.
doi: 10.1016/j.foodchem.2008.04.036

View at Publisher

20 Assirey, E.A.R.
Nutritional composition of fruit of 10 date palm (Phoenix dactylifera L.) cultivars grown in Saudi Arabia
(2015) *J. Taibah Univ. Sci.*, 9 (1), pp. 75-79. Cited 51 times.

21 Herchi, W., Kallel, H., Boukhchina, S.
Physicochemical properties and antioxidant activity of Tunisian date palm (Phoenix dactylifera L.) oil as affected by different extraction methods
(2014) *Food Sci. Technol. (Campinas)*, 34 (3), pp. 464-470. Cited 17 times.

22 Al-Mamary, M., Al-Habori, M., Al-Zubairi, A.S.
The in vitro antioxidant activity of different types of palm dates (Phoenix dactylifera) syrups (Open Access)

(2014) *Arabian Journal of Chemistry*, 7 (6), pp. 964-971. Cited 30 times.
http://colleges.ksu.edu.sa/Arabic%20Colleges/CollegeOfScience/ChemicalDept/AJC/default.aspx (ScienceDirect http://www.sciencedirect.com/science/journal/18785352)
doi: 10.1016/j.arabjc.2010.11.014

View at Publisher

23 Halliwell, B.
Antioxidant defence mechanisms: From the beginning to the end (of the beginning)

(1999) *Free Radical Research*, 31 (4), pp. 261-272. Cited 601 times.
doi: 10.1080/10715769900300841

View at Publisher

24 Halliwell, B., Gutteridge, J.M.
(2015) *Free Radicals in Biology and Medicine*. Cited 19584 times.
Oxford University Press: USA

25 Javanmardi, J., Kubota, C.
Variation of lycopene, antioxidant activity, total soluble solids and weight loss of tomato during postharvest storage

(2006) *Postharvest Biology and Technology*, 41 (2), pp. 151-155. Cited 178 times.
doi: 10.1016/j.postharvbio.2006.03.008

View at Publisher

26 Biglari, F., AlKarkhi, A.F.M., Easa, A.M.
Antioxidant activity and phenolic content of various date palm (Phoenix dactylifera) fruits from Iran

(2008) *Food Chemistry*, 107 (4), pp. 1636-1641. Cited 286 times.
doi: 10.1016/j.foodchem.2007.10.033

View at Publisher

27 Vayalil, P.K.
Antioxidant and antimutagenic properties of aqueous extract of date fruit (Phoenix dactylifera L. Arecaceae)

(2002) *Journal of Agricultural and Food Chemistry*, 50 (3), pp. 610-617. Cited 234 times.
doi: 10.1021/jf010716t

View at Publisher

28 Saafi, E.B., Louedi, M., Elfeki, A., Zakhama, A., Najjar, M.F., Hammami, M., Achour, L.
Protective effect of date palm fruit extract (Phoenix dactylifera L.) on dimethoate induced-oxidative stress in rat liver

(2011) *Experimental and Toxicologic Pathology*, 63 (5), pp. 433-441. Cited 86 times.
doi: 10.1016/j.etp.2010.03.002

View at Publisher

29 Sharma, Y., Bashir, S., Irshad, M., Gupta, S.D., Dogra, T.D.
Effects of acute dimethoate administration on antioxidant status of liver and brain of experimental rats

(2005) *Toxicology*, 206 (1), pp. 49-57. Cited 142 times.
doi: 10.1016/j.tox.2004.06.062

View at Publisher

30 Mansouri, A., Embarek, G., Kokkalou, E., Kefalas, P.
Phenolic profile and antioxidant activity of the Algerian ripe date palm fruit (Phoenix dactylifera)

(2005) *Food Chemistry*, 89 (3), pp. 411-420. Cited 311 times.
doi: 10.1016/j.foodchem.2004.02.051

View at Publisher

31 Yun, J.H., Tomas-Barberan, F.A., Kader, A.A., Mitchell, A.E.
The flavonoid glycosides and procyanidin composition of Deglet Noor dates (Phoenix dactylifera)

(2006) *Journal of Agricultural and Food Chemistry*, 54 (6), pp. 2405-2411. Cited 132 times.
doi: 10.1021/jf0581776

View at Publisher

32 Allaith, A.A.A.
Antioxidant activity of Bahraini date palm (Phoenix dactylifera L.) fruit of various cultivars

(2008) *International Journal of Food Science and Technology*, 43 (6), pp. 1033-1040. Cited 104 times.
doi: 10.1111/j.1365-2621.2007.01558.x

View at Publisher

33 Chaira, N., Smaali, M.I., Martinez-Tomé, M., Mrabet, A., Murcia, M.A., Ferchichi, A.
Simple phenolic composition, flavonoid contents and antioxidant capacities in water-methanol extracts of Tunisian common date cultivars (Phoenixdactylifera L.)

(2009) *International Journal of Food Sciences and Nutrition*, 60 (SUPPL. 7), pp. 316-329. Cited 42 times.
doi: 10.1080/09637480903124333

View at Publisher

34 Pujari, R.R., Vyawahare, N.S., Thakurdesai, P.A.
Neuroprotective and antioxidant role of Phoenix dactylifera in permanent bilateral common carotid occlusion in rats
(2014) *J. Acute Dis.*, 3 (2), pp. 104-114. Cited 6 times.

35 Hussein, A.M., El-Mousalamy, A.M., Hussein, S.A., Mahmoud, S.A.
Effects of palm dates (Pheonix dactylifera L) extracts on hepatic dysfunction in type 2 diabetic rat model
(2015) *World J. Pharmacy Pharm. Sci.*, 4 (7), pp. 62-79. Cited 4 times.

36 Diab, K.A.S., Aboul-Ela, E.I.
In vivo comparative studies on antigenotoxicity of date palm (Phoenix dactylifera l.) pits extract against DNA damage induced by N-Nitroso-N- methylurea in mice

(2012) *Toxicology International*, 19 (3), pp. 279-286. Cited 17 times.
doi: 10.4103/0971-6580.103669

View at Publisher

37 Ishurd, O., Kennedy, J.F.
The anti-cancer activity of polysaccharide prepared from Libyan dates (Phoenix dactylifera L.)

(2005) *Carbohydrate Polymers*, 59 (4), pp. 531-535. Cited 79 times.
doi: 10.1016/j.carbpol.2004.11.004

View at Publisher

38 Fullerton, S.A., Samadi, A.A., Tortorelis, D.G., Choudhury, M.S., Mallouh, C., Tazaki, H., Konno, S.
Induction of apoptosis in human prostatic cancer cells with β-glucan (Maitake mushroom polysaccharide)

(2000) *Molecular Urology*, 4 (1), pp. 7-13. Cited 78 times.

39 Chan, G.C., Chan, W.K., Sze, D.M.
The effects of beta-glucan on human immune and cancer cells.

(2009) *Journal of hematology & oncology*, 2, p. 25. Cited 368 times.

40 Ishurd, O., Zgheel, F., Kermagi, A., Flefla, M., Elmabruk, M.
Antitumor activity of β-D-glucan from Libyan dates

(2004) *Journal of Medicinal Food*, 7 (2), pp. 252-255. Cited 14 times.
doi: 10.1089/1096620041224085

View at Publisher

41 Bahmanpour, S., Talaei, T., Vojdani, Z., Panjehshahin, M.R., Poostpasand, A., Zareei, S., Ghaeminia, M.
Effect of Phoenix dactylifera pollen on sperm parameters and reproductive system of adult male rats

(2006) *Iranian Journal of Medical Sciences*, 31 (4), pp. 208-212. Cited 57 times.
http://ijms.sums.ac.ir/31_4/07-Bahmanpour.pdf

42 Abedi, A., Parviz, M., Karimian, S.M., Rodsari, H.R.S.
Aphrodisiac activity of aqueous extract of Phoenix dactylifera pollen in male rats
(2013) *Adv. Sexual Med.*, 3 (1), p. 28. Cited 13 times.

43 Ali, B.H., Bashir, A.K., Alhadrami, G.
Reproductive hormonal status of rats treated with date pits

(1999) *Food Chemistry*, 66 (4), pp. 437-441. Cited 35 times.
doi: 10.1016/S0308-8146(98)00060-0

View at Publisher

44 Shraideh, Z.A., Abu-Elteen, K.H., Sallal, A.-K.J.
Ultrastructural effects of date extract on Candida albicans

(1998) *Mycopathologia*, 142 (3), pp. 119-123. Cited 36 times.
doi: 10.1023/A:1006901019786

View at Publisher

45 Abuharfeil, N.M., Sukhon, S.El., Msameh, Y., Sallal, A.-K.J.
Effect of date fruits, Phoenix dactylifera L., on the hemolytic activity of streptolysin O

(1999) *Pharmaceutical Biology*, 37 (5), pp. 335-339. Cited 10 times.
doi: 10.1076/phbi.37.5.335.6051

View at Publisher

46 Ammar, N.M., Lamia, T., Abou, E., Nabil, H.S., Lalita, M.C., Tom, J.M.
Flavonoid constituents and antimicrobial activity of date (Phoenix dactylifera L.) seeds growing in Egypt.
Proceedings of 4th conference on research and development of pharmaceutical industries (Current Challenges)
(2009) *Med. Arom. Plant Sci. Biotechnol.*, 3, pp. 1-5. Cited 6 times.

47 Aamir, J., Kumari, A., Khan, M.N., Medam, S.K.
Evaluation of the combinational antimicrobial effect of Annona Squamosa and Phoenix dactylifera seeds methanolic extract on standard microbial strains
(2013) *Int. Res. J. Biol. Sci.*, 2 (5), pp. 68-73. Cited 13 times.

48 Jassim, S.A.A., Naji, M.A.
In vitro evaluation of the antiviral activity of an extract of date palm (phoenix dactylifera l.) pits on a pseudomonas phage (Open Access)

(2010) *Evidence-based Complementary and Alternative Medicine*, 7 (1), pp. 57-62. Cited 39 times.
doi: 10.1093/ecam/nem160

View at Publisher

49 Awad, M.A., Al-Qurashi, A.D., Mohamed, S.A.
Antioxidant capacity, antioxidant compounds and antioxidant enzyme activities in five date cultivars during development and ripening

(2011) *Scientia Horticulturae*, 129 (4), pp. 688-693. Cited 33 times.
doi: 10.1016/j.scienta.2011.05.019

View at Publisher

50 Saleh, E.A., Tawfik, M.S., Abu-Tarboush, H.M.
Phenolic contents and antioxidant activity of various date palm (Phoenix dactylifera L.) fruits from Saudi Arabia
(2011) *Food Nut*, 2, pp. 1134-1141. Cited 43 times.

51 Singh, V., Guizani, N., Essa, M.M., Hakkim, F.L., Rahman, M.S.
Comparative analysis of total phenolics, flavonoid content and antioxidant profile of different date varieties (Phoenix dactylifera L.) From Sultanate of Oman

(2012) *International Food Research Journal*, 19 (3), pp. 1063-1070. Cited 34 times.
http://www.ifrj.upm.edu.my/19%20(03)%202012/(38)%20IFRJ%2019%20(03)%202012%20Eassa%20Oman.pdf

52 Zhang, C.-R., Aldosari, S.A., Vidyasagar, P.S.P.V., Nair, K.M., Nair, M.G.
Antioxidant and anti-inflammatory assays confirm bioactive compounds in ajwa date fruit

(2013) *Journal of Agricultural and Food Chemistry*, 61 (24), pp. 5834-5840. Cited 47 times.
doi: 10.1021/jf401371v

View at Publisher

53 Bokhari, N.A., Perveen, K.
In vitro inhibition potential of Phoenix dactylifera L. Extracts on the growth of pathogenic fungi
(2012) *J. Med. Plants Res.*, 6 (6), pp. 1083-1088. Cited 15 times.

54 El Sohaimy, S.A., Abdelwahab, A.E., Brennan, C.S., Aboul-Enein, A.M.
Phenolic content, antioxidant and antimicrobial activities of Egyptian date palm (Phoenix dactylifera L.) fruits
(2015) *Aust. J. Basic Appl. Sci.*, 9 (1), pp. 141-147. Cited 10 times.

55 Diagnosis and classification of diabetes mellitus (Open Access)

(2010) *Diabetes Care*, 33 (SUPPL. 1), pp. S62-S69. Cited 3443 times.
http://care.diabetesjournals.org/content/33/Supplement_1/S62.full.pdf+html
doi: 10.2337/dc10-S062

View at Publisher

56 *Fact Sheets of Diabetes*
(Accessed October 27, 2016)
http://www.who.int/mediacentre/factsheets/fs312/en/

57 Zangiabadi, N., Asadi-Shekaari, M., Sheibani, V., Jafari, M., Shabani, M., Asadi, A.R., Tajadini, H., (...), Jarahi, M.
Date fruit extract is a neuroprotective agent in diabetic peripheral neuropathy in streptozotocin-induced diabetic rats: A multimodal analysis (Open Access)

(2011) *Oxidative Medicine and Cellular Longevity*, art. no. 976948. Cited 40 times.
doi: 10.1155/2011/976948

View at Publisher

58 Michael, H.N., Salib, J.Y., Eskander, E.F.
Bioactivity of diosmetin glycosides isolated from the epicarp of date fruits, Phoenix dactylifera, on the biochemical profile of alloxan diabetic male rats

(2013) *Phytotherapy Research*, 27 (5), pp. 699-704. Cited 23 times.
doi: 10.1002/ptr.4777

View at Publisher

59 Nandhagopal, K., Kanniyakumari, M., Anbu, J., Velpandian, V.
Antidiabetic activity of Karchure chooranam on alloxan induced diabetic rats

(2013) *International Journal of Pharma and Bio Sciences*, 4 (1), pp. 434-439. Cited 3 times.
http://www.ijpbs.net/download.php?download_file=vol-4/issue-1/pharma/45.pdf&did=2034

60 Abolfathi, A.A., Mohajeri, D., Rezaie, A., Nazeri, M.
Protective effects of green tea extract against hepatic tissue injury in streptozotocin-induced diabetic rats (Open Access)

(2012) *Evidence-based Complementary and Alternative Medicine*, 2012, art. no. 740671. Cited 44 times.
doi: 10.1155/2012/740671

View at Publisher

61 Ramesh, B., Viswanathan, P., Pugalendi, K.V.
Protective effect of Umbelliferone on membranous fatty acid composition in streptozotocin-induced diabetic rats

(2007) *European Journal of Pharmacology*, 566 (1-3), pp. 231-239. Cited 42 times.
doi: 10.1016/j.ejphar.2007.03.045

View at Publisher

62 Azwanida, N.N.
A review on the extraction methods use in medicinal plants, principle, strength and limitation
(2015) *Med. Aromat. Plants*, 4 (196), pp. 2167-2412. Cited 122 times.

63 Soxhlet, F.
Die gewichtsanalytische Bestimmung des Milchfettes
(1879) *Dinglers Polytech. J.*, 232, p. 261. Cited 228 times.

64 Azmir, J., Zaidul, I.S.M., Rahman, M.M., Sharif, K.M., Mohamed, A., Sahena, F., Jahurul, M.H.A., (...), Omar, A.K.M.
Techniques for extraction of bioactive compounds from plant materials: A review

(2013) *Journal of Food Engineering*, 117 (4), pp. 426-436. Cited 539 times.
http://www.sciencedirect.com/science/journal/02608774
doi: 10.1016/j.jfoodeng.2013.01.014

View at Publisher

65 Iverson, S.J., Lang, S.L.C., Cooper, M.H.
Comparison of the bligh and dyer and folch methods for total lipid determination in a broad range of marine tissue

(2001) *Lipids*, 36 (11), pp. 1283-1287. Cited 413 times.
http://www.springerlink.com/content/0024-4201
doi: 10.1007/s11745-001-0843-0

View at Publisher

66 Karasawa, K., Uzuhashi, Y., Hirota, M., Otani, H.
A matured fruit extract of date palm tree (Phoenix dactylifera L.) Stimulates the cellular immune system in mice

(2011) *Journal of Agricultural and Food Chemistry*, 59 (20), pp. 11287-11293. Cited 37 times.
doi: 10.1021/jf2029225

View at Publisher

67 Rostagno, M.A., Prado, J.M.
Natural Product Extraction: Principles and Applications (No. 21). 2013
Royal Society of Chemistry.. Cited 3 times.

68 Song, J.-Z., Mo, S.-F., Yip, Y.-K., Qiao, C.-F., Han, Q.-B., Xu, H.-X.
Development of microwave assisted extraction for the simultaneous determination of isoflavonoids and saponins in Radix Astragali by high performance liquid chromatography

(2007) *Journal of Separation Science*, 30 (6), pp. 819-824. Cited 41 times.
doi: 10.1002/jssc.200600340

View at Publisher

69 Stalikas, C.D.
Extraction, separation, and detection methods for phenolic acids and flavonoids

(2007) *Journal of Separation Science*, 30 (18), pp. 3268-3295. Cited 413 times.
doi: 10.1002/jssc.200700261

View at Publisher

70 Aris, N., Norhuda, I.
Adeib, I. Extraction of Phoenix dactylifera (Mariami) seeds oil using supercritical carbon dioxide (SC-CO_2)
(2013) *Int. J.*, (1), p. 4.

71 Aris, N.A., Norhuda, I., Adeib, I.S.
Comparison on oil yield of Phoenix dactylifera seed oil extraction by supercritical carbon dioxide and solvent extraction method at 50°C
(2015) *Adv. Mat. Res.*, p. 1113.

72 Lang, Q., Wai, C.M.
Supercritical fluid extraction in herbal and natural product studies - A practical review

(2001) *Talanta*, 53 (4), pp. 771-782. Cited 427 times.
doi: 10.1016/S0039-9140(00)00557-9

View at Publisher

73 Bimakr, M., Rahman, R.A., Taip, F.S., Ganjloo, A., Salleh, L.M., Selamat, J., Hamid, A., (...), Zaidul, I.S.M.

Comparison of different extraction methods for the extraction of major bioactive flavonoid compounds from spearmint (Mentha spicata L.) leaves

(2011) *Food and Bioproducts Processing*, 89 (1), pp. 67-72. Cited 129 times.
doi: 10.1016/j.fbp.2010.03.002

View at Publisher

74 Pereira, P., Cebola, M.-J., Oliveira, M.C., Bernardo-Gil, M.G.

Supercritical fluid extraction vs conventional extraction of myrtle leaves and berries: Comparison of antioxidant activity and identification of bioactive compounds

(2016) *Journal of Supercritical Fluids*, 113, pp. 1-9. Cited 16 times.
doi: 10.1016/j.supflu.2015.09.006

View at Publisher

Ferdosh, S.; Department of Plant Science, Faculty of Science, International Islamic University Malaysia, Kuantan, Pahang, Malaysia; email:sahena@iium.edu.my
© Copyright 2019 Elsevier B.V., All rights reserved.

Back to results | 1 of 1

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
切換到繁體中文
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