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Phytochemical and antioxidant capacity profiles of syzygiumcumini (L.) skeelsleaves grown in Telur Bagan Kedah , Malaysia using sequential cold percolation extraction (Article)

Sukmasari, S.[a], Mohd, F.N.[b], Abdul Qader, O.A.J.[c], Doolaanea, A.[d], Abdul Rahman, M.N.[d]

[a]Department of Paediatric Dentistry, Kulliyyah of Dentistry, International Islamic University Malaysia , Bandar InderaMahkota, Kuantan, Pahang 25200, Malaysia
[b]Department of Special Needs Dentistry, Kulliyyah of Dentistry, International Islamic University Malaysia , Bandar InderaMahkota, Kuantan, Pahang 25200, Malaysia
[c]Department of Oral Medicine and Oral Pathology, Kulliyyah of Dentistry, International Islamic University Malaysia , Bandar InderaMahkota, Kuantan, Pahang 25200, Malaysia

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Abstract

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This study aimed to investigate the phytochemicals and antioxidant properties of Syzygiumcumini(L.) Skeels grown in Telur BaganKedah, Malaysia Syzygiumcuminiwas extracted successively in 5 different solvents which are petroleum ether, toluene, ethyl acetate, acetone, and water, using sequential cold percolation method. The dried crude extractswerecharacterized for percentage yield, total phenolic content, total flavonoid content, percentage of DPPH radical scavenging activity, and reducing power to reduce Fe^{3+} to Fe^{2+} using FRAP assay.Extracts from different solvents produced different results. Toluene extract had the highest percentage yield, and highest total phenolic content, whereas acetone extract had the highest total flavonoid content. Water extract had the highest antioxidant capacity using DPPH test, with value of 11.89 ± 1.14 mg AEAC/g of dried leaves and reducing power from FRAP assay with value of 4512.83 ± 287.73 µg AAE/g of dried leaves. Petroleum ether had the highest antioxidant capacity in terms of inhibitory concentration of DPPH, due to its lowest IC_{50} value.All the phytochemical and antioxidant properties of Syzygiumcumini were successfully documented, analyzed.

Reaxys Database Information

View Compounds

Author keywords

Antioxidant | DPPH | Flavonoids | FRAP | Phenolic contents | Syzygiumcumini

Indexed keywords

EMTREE drug terms: acetic acid ethyl ester | ascorbic acid | flavonoid | gallic acid | phenol | phenol derivative | phytochemical | Syzygium cumini extract

EMTREE medical terms: antioxidant activity | antioxidant assay | Article | controlled study | DPPH radical scavenging assay | extraction | ferric reducing antioxidant power assay | IC50 | Malaysia | nonhuman | oxidative stress | pH measurement | phytochemistry | plant leaf | sequential cold percolation method | Syzygium cumini

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Padalia, H. , Poptani, R. , Chanda, S.
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The effect of incorporating Baccaurea Angulata extract on rheological properties of various gelling polymers

Abdul Qader, O.A.J. , Sukmasari, S. , Doolaanea, A.A.

Chemicals and CAS Registry Numbers:

acetic acid ethyl ester, 141-78-6; ascorbic acid, 134-03-2, 15421-15-5, 50-81-7; gallic acid, 149-91-7; phenol, 108-95-2, 3229-70-7

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Abdul Rahman, M.N.; Advanced Drug Delivery Lab, Department of Pharmaceutical Technology, Kulliyyah of Pharmacy, International Islamic University Malaysia , Bandar InderaMahkota, Kuantan, Pahang, Malaysia ; email:nasrin.rahman@live.iium.edu.my