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Physicochemical properties of cocoa butter replacers from supercritical carbon dioxide extracted mango seed fat and palm oil mid-fraction blends

By: Jahurul, MHA (Jahurul, M. H. A.)^[1,2]; Zaidul, ISM (Zaidul, I. S. M.)^[3]; Sahena, F (Sahena, F.)^[4]; Sharifudin, MS (Sharifudin, M. S.)^[1]; Norulaini, NN (Norulaini, N. N.)^[5]; Ali, ME (Ali, Md. Eaqub)^[6]; Hasmadi, M (Hasmadi, M.)^[1]; Ghafoor, K (Ghafoor, K.)^[7]; Zzaman, W (Zzaman, Wahidu)^[2,8]; Omar, AKM (Omar, A. K. M.)^[2]

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Abstract

Supercritical carbon dioxide (scCO₂) extracted mango seed fat (MSF) was blended with palm oil mid-fraction (POMF) to obtain cocoa butter replacers (CBRs). The fatty acid constituents and physicochemical properties of the formulated blends were analysed by gas chromatography (GC). In this study, the fatty acid constituents and other physicochemical properties such as iodine value (43.2 to 43.4 g I-2/100 g fat), saponification value (195.7 to 195.9 mg KOH/g fat), acid value (2.1 to 2.7%), and slip melting point (33.8 to 34.9 degrees C) of blends MSF/POMF at ratios 85/15, 80/20, 75/25, and 70/30 were found similar to the physicochemical properties of commercial cocoa butter. Thus, it could be concluded that the MSF/POMF blends that are blends 85/15, 80/20, 75/25, and 70/30 (3 to 6) could be suggested as CBRs in terms of the physicochemical properties like fatty acid constituents, iodine, saponification and acid values and slip melting point. (c) All Rights Reserved

Keywords

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Author Information

Reprint Address: Jahurul, MHA (reprint author)

+ Univ Malaysia Sabah, Fac Food Sci & Nutr, Kota Kinabalu 884000, Sabah, Malaysia.

Reprint Address: Jahurul, MHA (reprint author)

+ Univ Sains Malaysia, Sch Ind Technol, George Town 11800, Malaysia.

Addresses:

+ [1] Univ Malaysia Sabah, Fac Food Sci & Nutr, Kota Kinabalu 884000, Sabah, Malaysia

+ [2] Univ Sains Malaysia, Sch Ind Technol, George Town 11800, Malaysia

- [3] Int Islamic Univ, Kulliyah Pharm, Dept Pharmaceut Technol, Kuantan Campus, Kuantan 25200, Pahang, Malaysia

Organization-Enhanced Name(s)

International Islamic University Malaysia

- [4] IIUM, Fac Sci, Kuantan Campus, Kuantan 25200, Pahang, Malaysia

Organization-Enhanced Name(s)

International Islamic University Malaysia

+ [5] Univ Sains Malaysia, Sch Distance Educ, Minden 11800, Penang, Malaysia

+ [6] Univ Malay, Nanotechnol & Catalysis Res Ctr NANOCAT, Kuala Lumpur 50603, Malaysia

+ [7] King Saud Univ, Coll Food & Agr Sci, Dept Food Sci & Nutr, POB 2460, Riyadh 11451, Saudi Arabia

[8] Shahjalal Univ Sci & Technol, Dept Food Engn & Tea Technol, Sylhet 3114, Bangladesh

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E-mail Addresses: jahurul@ums.edu.my

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