



Cocoa butter expression from cocoa nibs: effects of pre-treatment and process parameters on expression yield

Submitted by Cécile Grémy-Gros on Tue, 05/12/2015 - 14:36

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| Auteur | Grémy, Cécile [1], Ravelona, Manda Rabé [2], Lanoisellé, Jean-Louis [3] |
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| Mots-clés | Cocoa butter [4], compressibility modulus [5], hydraulic expression [6], rheological behaviour [7] |
| Résumé en anglais | Cocoa butter is obtained in industrial conditions from cocoa liquor using hydraulic presses with an average oil yield of 42%. Our objective was to study the extraction of cocoa butter directly from cocoa nib and to determine the influence of pressing parameters such as the type of beans (green bean (GB), roasted alkalised bean (RAB), roasted bean (RB)), temperature, and pressure on cocoa butter yield. The extraction result depends on the rheological behaviour of the cake, which can be modelised with a four component Kelvin-Voigt model. The RAB (with a yield of 39%) is easier to press than the RB (38%) and GB (13%). The global mean compressibility coefficients of the Kelvin-Voigt model are 1.4, 1.7 and 2.1 MPa respectively for RAB, RB, and GB. |
| URL de la notice | http://okina.univ-angers.fr/publications/ua11249 [8] |

Liens

[1] <http://okina.univ-angers.fr/cecile.gros/publications>

[2] [http://okina.univ-angers.fr/publications?f\[author\]=19976](http://okina.univ-angers.fr/publications?f[author]=19976)

[3] [http://okina.univ-angers.fr/publications?f\[author\]=2496](http://okina.univ-angers.fr/publications?f[author]=2496)

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