

# Effect of roasting on the fatty acid profile of cocoa butter that was extracted by two methods, from Barlovento, Venezuela

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## Abstract

The Venezuela cocoa is very famous worldwide for its quality and flavor. In the Miranda state (Venezuela), cocoa hybrids of good quality are found. Cocoa fat has functional properties that are affected by extraction methods and postharvest processes: fermentation, drying and roasting. These effects have been studied a little, so in this study, in order to increase information, the effect of roasting on the proximal composition and fatty acid profile of cocoa butter extracted by two methods from cocoa beans grown in Barlovento, Miranda was researched. The proximal composition of the cocoa beans was evaluated following the official methods of AOAC (2000) and Covenin (1995) and the butter was extracted by the methods of pressing and solvents. In addition, the yields were calculated. In the cocoa butter extracted by both methods, the fatty acids profile was assessed by HPLC and the ratio of saturated and unsaturated fatty acids was calculated. The results were processed using the SPSS program (2004). It can be concluded that there is an effect from roasting on the moisture, crude fat, and total sugar contents. The yield obtained by extraction with the solvent method was greater (30.7-32.0%) than the yield obtained by the pressing method (46.2-45.6%). The fatty acids: stearic, oleic, and palmitic were the most representative, followed by linoleic and palmitoleic fatty acids. It should be noted that the solvent extraction process did not remove C14 or C20:2n-6 and the roasting process affected the presence of C17:0. These results establish the differences between the cocoa butter production and profile as a function of the post-harvest treatments and, also, as a result of the methods of extraction.