

Title Triacylglycerol molecular species variation in stored coffee beans determined by reverse-high-performance liquid chromatography/refractive index detector

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Abstract

Samples of three types of coffee beans (immature, random mixture and cherry) were each divided into roughly two halves and dried by two widely known procedures (conventional dryer and open air cement floor patio) to attain about 14% moisture. All samples were stored on wood shelves without temperature or moisture control. After 4, 7, 10, 13, 16 and 19 months, portions of all samples were withdrawn and the relative percentages of the nine triacylglycerol (TAG) molecular species determined by reverse-high-performance liquid chromatography with a refractive index detector. The experiment consisted of 36 treatments (combinations of bean types, drying procedures and storage times) in a randomized block design with three repetitions. Nine TAG molecular species were identified in all the coffee samples. While apparently random variation was observed in TAG composition in a few cases, no significant effects of storage time, storage type or coffee type on TAG composition were observed.