

Potential Ways to Increase the Value of Macadamia Industry

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Macadamia is an evergreen tree from the Proteaceae family. As a natural whole food, macadamia nuts contain highly unsaturated fatty acid, vitamins, minerals and antioxidants. However, there is a very high ratio (approximately 70%) of waste from the Macadamia industry and this waste is unavoidable. In fact, the volume of waste produced, which consists of organic materials could be utilized further to enhance the value of the macadamia industry. In this study, three types of agro-waste, the husks, shells and dropping flowers have been investigated. Biological activity tests were done in order to determine the uses of these wastes. It was found that some of the extracts from the husks showed whitening activity which has potential in the natural cosmetics field. The cellulose (34.65%) and acid-insoluble lignin (39.75%) were the main components in macadamia shell, its lignin is primarily composed of Syringyl (S) lignin which was a complex matrix suitable as a natural filter material. The dropping flowers have high essential oil content (0.76%) which could have a use in the natural perfume industry. The results of the studies indicated that there were other ways to increase the value of the macadamia industry.