93 PROFILING OF SOYBEAN (*Glycine Max* (L.) GENOTYPES WITH HIGH FUNCTIONAL OIL CONTENT FOR INDUSTRIAL AND DOMESTIC APPLICATIONS

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Abstract

Globally, bio-based industrial and domestic chemical sources are becoming increasingly demanded in the chemicals and materials industries. Soybean oil is produced within the beans (seeds) of soybean plant (Glycine max (L.) as an edible product. With the use of appropriate methods such as crushing and refining processes, soybean oil contains varying degrees of polyunsaturated fatty acids, monounsaturated fatty acids, and saturated fatty acids but depends on the varietal genetic makeup and some environmental factors. The aim of this study was to estimate the oil contents of Twenty-three (23) soybean genotypes to explore their oil contents on comparative bases in order to elucidate their nutritional, pharmaceutical, and medicinal values using standard proximate analytical methods of the Association of Official Analytical Chemists (AOAC, 1999). The results showed the presence of (mean) fat contents ranging from 22.37-31.15%. The presence of high fat contents such as observed in this study means that most of the soybean genotypes used here could be considered as sources of quality raw materials for food (including human and animal) and for pharmaceutical applications.

Keywords: Edible oil, Bio-based, Nutritional, Fat and Genotype