

Comparative study of the antioxidant potentials of grape seed and peel extracts.

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Abstract.

A comparative study of the antioxidant potentials of extracts from grape seed and peel on lipid oxidation is reported in this study. Grape fruit sample was collected and the seed and peel of the fruit were separated and oven dried. This was further subjected to grinding and finally sieved to obtain a particle size of 500 μm . The extraction of antioxidant was carried out in a soxhlet extractor using methanol as the extraction solvent. The elemental analysis of the grape seed and peel extracts revealed that potassium was the most dominant element with a composition of 86 and 90.1% respectively. The effect of the grape seed and peel extracts on the mixture of oil sample was evaluated by measuring the oxidation stability using Rancimat machine. The oxidation stability of the oil mixture sample without and with the addition of grape seed and peel extracts were found to be 67, 553 and 569 minutes respectively. Furthermore, the results of the peroxide value, pH and free fatty acid of the oil mixture without and with grape seed and peel extracts were carried out and antioxidant effectiveness of the grape seed and peel extract calculated after 50 days to be 29% and 30% respectively. This result clearly showed that antioxidant potential of grape peel extract is slightly higher than that of grape seed extract.

Keywords: Antioxidant, Extraction, Fat and Oil, Grape fruit, Oxidation, Solvent

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