PHYSICOCHEMICAL PROPERTIES OF BANANA PEEL PECTIN

NURUL 'AIN BT MOHD KAMIL

BACHELOR OF SCIENCE (Hons.)
FOOD SCIENCE AND TECHNOLOGY
FACULTY OF APPLIED SCIENCES
UNIVERSITI TEKNOLOGI MARA

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ABSTRACT

PHYSICOCHEMICAL PROPERTIES OF BANANA PEEL PECTIN

The aim of this study is to determine the proximate analysis of banana peel and determine the physicochemical properties of pectin from two species of banana namely 'Pisang Emas' (*Musa acumimata*) and 'Pisang Berangan' (*Musa acuminate Cola cv. Berangan*). The moisture content of 'Pisang Berangan' and 'Pisang Emas' peels were 3.93% ± 0.09 and 2.71± 0.1 respectively. The ash content of 'Pisang Berangan' and 'Pisang Emas' peels were 11.55 ± 0.15 and 13.54 ± 0.14 respectively. The fat content of 'Pisang Berangan' and 'Pisang Emas' peels were 4.63 ± 0.13 and 4.26 ± 0.09 respectively. The protein content of 'Pisang Berangan' and 'Pisang Emas' peels were 4.93% ± 0.18 and 4.02 ± 0.32 respectively. The crude fibre content of 'Pisang Berangan' and 'Pisang Emas' peels were 43.01% ± 0.08 and 41.24% ± 0.09 respectively. The carbohydrate content of 'Pisang Berangan' and 'Pisang Emas' peels were 31.95% and 34.23% respectively. The colour, pH and total soluble solid of the pectin extracted from the banana peel were almost near to the commercial pectin while the degree of esterification for both 'Pisang Berangan' and 'Pisang Emas' were lower than the commercial pectin with value of 44.29% ± 5.15 and 47.62% ± 4.12 respectively. This indicates that the banana peel pectin was a low methoxyl pectin. The rheological properties of pectin shows the same fluid characteristic as the commercial pectin which were pseudoplastic properties.