

**DETERMINATION OF FAVOURABLE AGAR MEDIA FOR
PROBIOTICS BACTERIA BY COLONY ENUMERATION**

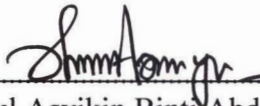
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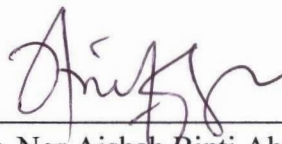
This Final Year Project Report entitled “**Determination of Favourable Agar Media for Probiotics Bacteria by Colony Enumeration**” was submitted by Syahirah binti Ismail, in partial fulfilment of the requirements for the Degree of Bachelor of Science (Hons.) Biology, in the Faculty of Applied Sciences, and was approved by



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ABSTRACT

DETERMINATION OF FAVOURABLE AGAR MEDIA FOR PROBIOTIC BACTERIA BY COLONY ENUMERATION

In recent years, the study of probiotic bacteria has gained interest in research and also in industrial fields for the commercialization. Probiotic bacteria are well known as good bacteria that are beneficial for the gastrointestinal environment. In fact, probiotic bacteria can be grown and cultivated on the media that is capable to supply adequate nutrient and provide a favourable environment to support the bacteria growth. Probiotic bacteria produce lactic acid by utilization and fermentation of the sugar. Hence, the tomato fruit that contains sugar is capable to fulfil the probiotic bacteria growth requirement. Thus, the probiotic bacteria were grown on the tomato agar and compared to Man Rogosa (MRS) agar that is a common agar used to cultivate the probiotic bacteria colony. Two types of tomatoes which are cherry tomato and the fruit tomato were used as there is a difference in their concentration of sugar content. The visible colonies that formed on the agar were counted as the Colony Forming Units/ml (CFU/ml). MRS agar grows the highest colony of probiotic bacteria which were 94.0×10^6 CFU/ml followed by 37.5×10^6 CFU/ml and 18.1×10^6 CFU/ml for cherry tomato agar and the fruit tomato agar respectively. Agar with the most colony enumerated are considered as the most favourable agar media for probiotic bacteria. The probiotic bacteria were also tested by several biochemical tests for the identification include IMViC test and Gram staining.