Identification of the physical, Anti-diabetic and Anti-oxidants properties of yogurt with *S. officinalis* and *S. rebaudiana*

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ABSTRACT

Fuctional food plays a major role in the mainatiance of healthy life styles of an individual .According to a survey, it has been found that lifestyle of the peoples in the Malaysia is the reason for obesity. There was a survey conducted in year 2016-2017in schools of Malaysia and it has been found that in the school canteen of the Malaysia was offering the tasty food but less food nutrient which plays a major role in the obesity in the young age group. We had hypothesis that formuation of yogurt with combination of two medicinal herbs(S. Officinalais and S.rebaudiana) will have the higher anti-diabtetic and anti-oxidants properties than the commerical yogurt. The yogurt was formulated with the addition of different concentration of the plant's species such as 15% (S1),25% (S2), and 50% (S3), respectively, and compared with the pure yogurt (C). All the four different samples of yogurt product were then subjected to physical properties analyses and *In vitro* antioxidant and anti-diabetic activity, followed by business plan for manufacturing yogurt The physical analyses showed that an addition of 15%, 25% and 15% of herbal yogurt had significant effect ($p<0.05$) on pH, viscosity, total soluble solid, and colour. The *In vitro* antioxidant and anti-diabetic activity showed that an addition of 15%, 25% and 15% of herbal yogurt had a significant effect ($p<0.05$) on DPPH radical scavenging activity, NO scavenging activity, anti-lipid peroxidation, α-glucosidase enzyme inhibition α-amylase enzyme inhibition. Furthermore, the addition of yogurt herbal resulted in the increment of the mean values of pH, viscosity, and colour excluting the total solid content and the results from *In vitro* antioxidant and anti-diabetic activity showed that S1 had highest in terms of DPPH than the S2, and S3, but S3 had highest in NO scavenging activity, anti-lipid peroxidation, α-glucosidase enzyme inhibition α-amylase enzyme inhibition.These results suggest that the herbal yogurt with 50% of *S.officinalis* and *S.rebaudianain* leaves solution could be used as a convenient product which is high in antioxidant and antidiabetic properties. Future research can be done by study on its sensory acceptance towards the product, microbiological tests, chemical properties, identification of the bioactive compounds and specific elemental analysis such as macrominerals, microminerals and vitamins content is suggested.

Key words: Fuctional Food, Obesity, Diabetes Mellitus , S. Officinalais and S.Rebaudiana.