

# Food poisoning at Sekolah Menengah X in Bera district

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## **ABSTRACT**

Food Poisoning one of most common notifiable in Malaysia and Pahang as well. A retrospective cohort study was conducted during outbreak of food poisoning in which occurred on 15 March 2017 at SMK in Bera District. The aim of study to determine aetiology, the mode of transmission, the source and the risk factor of outbreak and in order to take appropriate action and prevention. This study involved all student that lived in Asrama SMK and were subjected to standard questionnaire. The environmental investigation was based on HAACP, and bacterial investigation taken from food, water, surrounding (food handler hand, and equipment involved with food preparation). A total of 42 cases identified and 144 student had no symptoms of food poisoning. Distribution of cases based on signs and symptoms are Abdominal cramp (95.23%), Diarrhoea (83.33%), nausea (21.43%), vomiting (7.14%) and fever (0%). The epidemic curve was plotted showed single peaked, that suggest common source, the contaminant probably consumed at 7.00 pm 14 March 2017. Ayam Masak Kurma probably the causes of food poisoning. The reason why, the relative risk those consume Ayam Masak Kurma is 19.98 (>1), P value (<0.001) and holding time was 7.5 hours (more than 4 hours). Thus most likely organism is Salmonella spp due to median Incubation period 14 hours, associated with chicken and holding time more than 4 hours. Following outbreaks, several measure was taken including close-up the canteen. All cases of food poisoning are well and treated as outpatient.

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# Functional properties of cosmos caudatus kunth leaf extract and its application in the production of low fat ice cream

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## **ABSTRACT**

Cosmos caudatus also known as wild cosmos, is a herbaceous, seed propagated and perennial herb. In Malaysia, it is usually eaten raw as salads and also used in dishes such as kerabu, among the Malay communities. It was reported that C.caudatus consisted of several bioactive compounds with various functionalities. Diabetes mellitus is a life threatening disease that cause suffering to many people around the world. Obesity is rapidly growing, worldwide epidemic and increases the risk of morbidity, in many countries across the world. The objectives of the study are to determine anti-diabetic and anti-obesity properties of C.caudatus leaf extracts, to determine the metabolites present in the extracts and to develop functional food using C.caudatus. C.caudatus leaf was extracted using ethanol, ethyl acetate and hexane. Profiling of the extracts was done using Nuclear Magnetic Resonance and High performance liquid chromatography. Anti-diabetic and anti-obesity activity of the was evaluated using inhibition of  $\alpha$ -glucosidase and pancreatic lipase activity respectively. Results of the study showed that ethanol extract of C.caudatus exhibited highest inhibition  $\alpha$ -glucosidase activity compared to that of ethyl acetate extracts and hexane extracts. The results also showed the highest pancreatic lipase inhibition was demonstrated by that of ethanol extract with inhibition compared to that of ethyl acetate extracts and hexane extracts. The results for the highest DPPH inhibition was demonstrated by that of ethanol extract with inhibition compared to that of ethyl acetate extracts and hexane extracts. The total phenolic content in the low fat ice cream using carrageenan was higher which are 4.04mg/g in comparison with that added 10g and 15g C.caudatus powder for the stabiliser. Proximate analysis results for the C.caudatus low fat ice cream developed using 20g C.caudatus powder with carrageenan are the best. Results from the study will lend support for increased consumption of C.caudatus and consequently help to alleviate both diabetes and obesity problems in Malaysia.