

## AFLATOXIN REDUCTION BY *LACTOBACILLUS CASEI* SHIROTA IN DIFFERENT AFLATOXICOSIS EXPOSURES

### TECHNOLOGY DESCRIPTION

The technology is a technique to reduce naturally occurring mycotoxins that are produced by *Aspergillus parasiticus* and *Aspergillus flavus*.

### TECHNOLOGY FEATURES

This study has explored by using the probiotic *Lactobacillus casei* Shirota (LcS) in acute and chronic aflatoxicosis. The probiotic LcS has been proven to reduce the level of aflatoxin if it is consumed daily as an oral supplementation. Presence of mucus due to induction of aflatoxins prevents adsorption of the toxin efficiently into the bacterial cell wall. Human intestine which is enriched with the LcS probiotic prior to the aflatoxin induction increases toxin adsorption into the bacterial cell wall. It also prevents mucus interference with the LcS probiotic action.

### ADVANTAGES

- Reduced level of aflatoxins
- Promotes healthy life

### INDUSTRY OVERVIEW

**Prospect: Producers of naturally cultured and fermented drink, Healthy conscious customers, nutritional and health practitioners promoting probiotic products**

Trade sources estimated functional foods consist about 40 per cent of total processed and retail packed food and drinks markets. Functional drinks such as isotonic drinks, energy drinks and, even, cultured milk drinks have very broad distribution channels that range from street side drinks stalls through to giant sized hypermarkets. Malaysia has a sizeable functional food and drink market niche within its very large food and beverage market, which is now valued at more than RM 30 billion. Trade sources comment that Malaysia has a small and growing functional drinks market within its very large beverage market. Estimates of consumption of these drinks range between 120 million and 130 million litres per annum. The bulk of these products are thought to be energy drinks and dairy-based products. This market is estimated to be valued at about RM480 million in 2010, with per capita consumption at about 4.5 litres per annum.



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