

SESSION 2 FOOD HALALNESS AND TECHNOLOGY

Presentation 3

HALAL FOOD INTEGRITY AND AUTHENTICATION

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Abstract

Adulteration is the act of intentionally taking the form of substitution of one species for another whereby the food products from one species have been mixed intentionally with either similar substitute ingredient or cheaper species. Issues on adulteration between halal (permissible) and haram (non-permissible) ingredients were highlighted in the foregoing discussion should not be taken lightly. The determination of food authenticity and detection of adulteration are major concerns not only to consumers, but also to industries and policy makers at all levels of the production process. Halal Products Research Institute (HPRI) of Universiti Putra Malaysia (UPM) serves as a one-stop center, through a comprehensive, balanced and multifaceted approach to study all aspects of halal products in national and global levels. Focusing in research and development (R&D) in the halal products industry, HPRI aims to be an excellence research center in halal products, as well as providing professional services in realizing Malaysia as a Global Halal Hub. Among the methods employed to determine the origin of these materials for example gelatins are High Performance Liquid Chromatography (HPLC) and Fourier Transform Infrared Spectroscopy (FTIR). Characterization of thermal behavior of gelatins using other complementary techniques such as Rheometry and Differential Scanning Calorimetry (DSC) were also investigated. Methods of detection of other questionable substances such as alcohol and pig-based products such as meat, fats, skin and hairs were also undertaken. Alcohol and fats were analysed using gas chromatography techniques, skin, feather and hairs using microscopy, whereas for and meat and meat products were analysed using DNA techniques. These techniques are important to facilitate the demands and needs of Muslims all over the world with an increasing awareness in consuming halal food products.

Keywords: Adulteration, Lard, Pork, Halal and Haram, Ingredients