12 Halal Production Requirements for Cereals and Confectionaries

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Cereal-based products include a large number of staple food products such as bread, breakfast cereals, cakes, candies, doughnuts, cookies, pastries, and chewing gum. The processing and composition of these products vary a great deal. The major ingredients used in this group of products are flour, sugar, and shortening. There are possibly hundreds of other ingredients used in cereal products, depending on the nature of each product (Riaz, 1996).

Some of the commonly used ingredients by the cereal and confectionary industries whose halal status is questionable include the following.

- **Gelatin**: May be used as a glaze component on doughnuts and strudels as well as some types of cake and pastry (Nuruddin, 2007). As discussed in Chapter 14, two types of gelatin are suitable for halal: (1) mammalian gelatin from halal-slaughtered animals, and (2) fish gelatin from fish consistent with the needs of a Muslim consumer. Those from fish with fins and removable scales are accepted by all Muslims. (All halal fish gelatins are mostly from category 1 fish although some may be from category 2, see Chapter 10.)

- **Mono- and di-glycerides**: These are emulsifiers quite widely used in the bakery and confectionary industries, and, to a lesser extent, in candy products. Although mono- and di-glycerides can be made from any fat or oil,
the only acceptable sources for halal foods are vegetable mono- and di-glycerides (Riaz, 1998) or those produced from halal-slaughtered animals.

- **Other emulsifiers**: Many different emulsifiers are available. These need to have a reliable halal certification to avoid those from unacceptable animal sources. Cream liquor generally contains varying amounts of alcohol and must be avoided in halal production (Riaz, 1997).
- **Pan greases and release agents**: Same rules apply as for “other emulsifiers.”
- **Food coatings**: Same rules apply as for “other emulsifiers.”
- **L-cysteine**: This amino acid may be used in some baked products to modify the texture of the batters and breading. Halal L-cysteine must be from either a vegetarian source, made synthetically under halal acceptable conditions, or from bird feathers either prior to slaughter or from birds slaughtered according to halal requirements. L-cysteine from human hair is also available but generally not accepted as halal, because it is considered offensive to one’s psyche, hence makrooh.

**PRODUCT TYPES**

Some of the key points in different product types such as breakfast cereals, bread, cookies and pastry, doughnuts and other fried goods, chewing gum, and marshmallows are discussed next.

**Breakfast Cereals**

Most of the breakfast cereals are rather simple formulations containing pure grain-based ingredients mixed in with sugar, salt, and a few other minor ingredients such as colors and flavors. However, many are also fortified with vitamins and minerals. All of these minor ingredients may have halal issues and require halal certification. Some breakfast cereals may also contain gelatin-based marshmallows, which must be presumed to not be halal unless the product is certified by a reliable halal agency (Sakr, 1999).

**Bread**

There is a large variety of breads. Many of the trace ingredients may have halal concerns and do need to be checked. As baked products there may also be issues with pan greases and release agents.

Many breads are made with yeast, which not only generates carbon dioxide but also produces alcohol. Although alcohol is one of the haram ingredients, the purpose of the yeast in making bread is very different from its purpose in brewing alcoholic drinks, that is, the carbon dioxide is what is sought rather than the alcohol. Hence, there is no concern with the presence of any residual alcohol in the bread after baking.
Cakes, Cookies, and Pastries

Again, the emphasis needs to be on checking all of the minor ingredients for proper halal status.

Doughnuts and other Fried Goods

The foremost requirement is that the frying oil should be vegetable oil or from a halal-slaughtered animal source. The processing of the oil should be checked. According to U.S. regulations, pure oils can contain up to 0.1% of ingredients that do not have to be labeled. Thus, the oil requires certification. Most vegetable oil is kosher certified and distributed separately from animal oils. Thus, it can generally be considered to be halal. As always, minor ingredients need to be carefully checked (Nasaruddin et al., 2012).

Chewing Gum

Gum-base and chewing gum might be composed of generally recognized as safe (GRAS) ingredients according to U.S. FDA regulations. Again, all of these ingredients need to be checked for their halal status including stearates and gelatin (Uddin, 1994), which are known to be of concern.

Marshmallows

Marshmallows are primarily sugar, gelatin, and flavors. A special kind of gelatin, usually pork, is required to make the best fluffy, non-sticky marshmallows. One can make halal marshmallows with halal-certified mammalian or fish gelatin. All other ingredients also need to be checked. In most plants, marshmallows are rolled in corn starch so that they do not stick to each other. It is very important that the equipment be thoroughly cleaned and old starch replaced with fresh starch before producing halal marshmallows. This is an expensive proposition as the starch is used over and over again. So, ideally, marshmallows will be produced in a plant dedicated to halal production.

HALAL CONTROL POINTS (HCP) FOR FLOUR- AND STARCH-BASED PRODUCTS

Although the process of bread making is quite simple, there are few points to consider in the production of bread (Figure 12.1).

HCP1: All major and minor ingredients used in manufacturing of bread.

HCP2: Release agent and pan grease if used should be halal suitable.

HCP3: Packaging materials used should also be halal suitable.
FIGURE 12.1 Flow-chart of bread making with respect to halal critical points (HCP).

REFERENCES


