



THE INSTITUTE OF FOOD TECHNOLOGISTS
The Society for Food Science and Technology

Volume 2 Number 1

May 12, 2000

DIVISION EXECUTIVE COMMITTEE AND JOINT OPEN BUSINESS MEETING

Tuesday, June 13, 2000

9 AM to 12 Noon

Wyndham Anatole Hotel

Please try to join us for this very important meeting. Suggestions for programs (symposia) in the coming years are most welcomed. Suggestions for other agenda items should be send to Dr. Chaudry.

DIVISION SYMPOSIUM (We have two this year!) AND POSTER SESSION

Session 10 Sunday AM

Ethnic Foods and Ingredients as Complementary or Alternative Medicine

Sponsor: Religious and Ethnic Food Division

Session 33 Monday AM

The Industrial Perspective on Kosher and Halal Foods

Sponsor: Religious and Ethnic Food Division

Session 86G Wednesday AM

Religious and Ethnic Foods (Poster Session)

Sponsor: Religious and Ethnic Food Division

Time: 8:30 AM- 12:00 PM

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IFT SEAFOOD PRODUCTS TECHNOLOGY GROUP

Past-Chair:Chair: Dr. Muhammad Chaudry, IFANCA, mchaudry@ifanca.orgChair-Elect: Rabbi Zushe Blech, Monsey, NY, blechz@aol.comSecretary/Treasurer: Dr. Mian Riaz, TAMU, mnriaz@tamu.eduExecutive Committee Members:

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 Student: Pervin Basaran, Cornell

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 Dr. Yao-Wen Huang, U of GA
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Newsletter Editor: JOE REGENSTEIN, Cornell, 112 Rice Hall Ithaca, NY 14853-5601
 607-255-2109 Fax: 607-257-2871 kosher@cornell.edu

Technical Program Committee: Joe RegensteinEqual Opportunity Statement:

"Discrimination based on race, color, sex, age, religion, national origin, disability or veteran's status is inappropriate at any IFT function because it can interfere with the ability of members to actively participate in IFT activities and can create an intimidating, hostile or offensive environment."

Responsibility Statement:

All signed items are the responsibility of the author and may not reflect the position of the probationary Religious and Ethnic Foods Division or IFT.

FULL PROGRAM INFORMATION:Session 10 Sunday AM

Ethnic Foods and Ingredients as Complementary or Alternative Medicine

Sponsor: Religious and Ethnic Food Division

Moderators(s): S. Uhl, Horizons Consulting; M. C. Mulry, FoodWise, Inc.

Time: 9:00 AM

9:00 AM: Introductory Remarks

9:05 AM: 10-1 Traditional Chinese functional foods and their preparation. Y. W. HUANG

9:20 AM: 10-2 Korean and Japanese foods and ingredients as medicine. C. H. LEE

9:35 AM: 10-3 Latin American foods and spices as alternative medicines. M. SANCHO

10:05 AM: 10-4 The Indian art of healing. S. UHL

10:35 AM: 10-5 Aromatic spices from North and East Africa used in traditional medicine. R. YOHANNES

11:05 AM: 10-6 The use of traditional foods and ingredients in the U.S.: Regulatory and quality aspects. M. C. MULRY

11:35 AM: 10-7 Food, lifestyle, and wellness: Making the supermarket the focus. J. B. PRATT

Session 33 Monday AM

The Industrial Perspective on Kosher and Halal Foods

Sponsor: Religious and Ethnic Food Division

Moderators(s): J. M. Regenstein, Dept. of Food Science, Cornell University;
 M. M. Chaudry, Islamic Food and Nutrition Council of America*

Time: 9:00 AM

9:00 AM: Introductory Remarks

9:05 AM: 33-1 DIVISION LECTURE: Getting Religion -- For Your Products, That Is. M. A. JACKSON

10:05 AM: 33-2 One company's perspective on serving halal markets. S. A. HUSSAIN

10:35 AM: 33-3 Conformance to halal standards by the U.S. meat and poultry industry. J. G. SURAK

11:05 AM: 33-4 The new perspective of kosher in 2000. M. LUBINSKY

11:35 AM: 33-5 A food processor's perspective of Kosher products. P. H. BROWN

EXECUTIVE COMMITTEE AND OPEN BUSINESS MEETING: Anatole Hotel, Tuesday Morning 9 to 12.

Session 86G Wednesday AM

Religious and Ethnic Foods (Poster Session)

Sponsor: Religious and Ethnic Food Division

Time: 8:30 AM- 12:00 PM

86G-1 Demographic factors affecting consumer preferences for bitter gourds in Taiwan. H. S. Li, H. C. Huang, S. M. WANG, C. H. Liao, L. T. Chen, K. L. Chen

86G-2 Studies on Kimchi fermentation using seasoning mixture fermented by starter. S. H. SEO, I. K. HWANG

86G-3 Capsaicin and dihydrocapsaicin composition of Turkish red peppers determined by high pressure liquid chromatography and correlated with an electronic nose. F. KOREL, N. Bagdatlioglu, M. O. Balaban

86G-4 Role of Flavor in Acceptability of Queso Fresco Cheese by Traditional and Non-Traditional Consumers. S. Clark, H. WARNER, L. Luedecke

86G-5 Herbs as ethnic medicine. P. BASARAN, N. BASARAN

Editor's Corner

The major item we will share with you in this issue is a wonderful guide to Halal Food Production courtesy of Mary Anne Jackson, our Division Lecturer and Dr. Chaudry, the current chair of the division. Thank you. Please also note that a ballot is attached and should be used to vote for the upcoming slate of officers. Also note the membership application, we need a total of 100 professional and regular members (unfortunately students and emeritus do not count) so that we can apply for permanent division status and leave the probationary status.

Joe M. Regenstein, Newsletter Editor

News Note from One of Our Members:

A book "Handbook of Spices, Seasonings and Flavorings" has been published by Susheela Raghavan Uhl, of Horizons Consulting. Chapters include: 1. Spices in History; 2. Trends in World of Spices Today; 3. Forms, Functions and Application of Spices; 4. A to Z Spices; 5. Emerging Flavor Contributors; and 6. Emerging Spice Blends and Seasonings. It is a comprehensive, global, modern reference book on spices, seasonings and flavorings, and which contains technical and culinary information for food technologists, chefs, marketers, academicians, nutritionists and other food professionals.

***Halal Industrial
Production Standards***

Written in cooperation by:

Dr. Muhammad Munir Chaudry
Mohammad Mazhar Hussaini

Mary Anne Jackson
Dr. Mian Nadeem Riaz

Published by J&M Company. *Illinois, USA*

PO Box 334, Deerfield, IL 60015 USA

Email: sales@halalcertified.com <http://www.halalcertified.com>

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For printed or email copies, contact publisher.

Halal Industrial Production Standards

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2. Training of Inspectors and Supervisors
3. Requirements for the Supervising Organization

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Halal Industrial Production Standards

Until recently, the word *halal* meant little to a producer who would pay a Muslim to bless the slaughter of animals in the plant, not use alcohol and then put *halal* on the product to entice Muslim consumers. Standards were so lax that some producers used tape recordings of the prescribed blessings to "meet the minimum requirements." Other producers "read books" or learned from Muslims what the "rules" were and established production standards to self-certify the halal status of their products.

Many Muslims began to rely upon non-halal certified products, particularly meats, since halal certification had been virtually non-existent. The Muslim community had no formal infrastructure established to monitor the authenticity of halal. Most halal-certified products were shipped overseas. Today, several Muslim organizations are "policing" U.S. producers to assure proper halal practices. U.S. companies failing to follow proper Muslim inspection standards may be destined for both domestic and international "black listings."

Many Muslim organizations reverted to stipulating that halal products had to be produced by Muslim-owned and operated companies, most of which were only state and not federally (U.S. Department of Agriculture) inspected. Products could not be sold across state lines. This created restraints of trade, making it impossible for institutions to comply with halal requirements. In addition, there were not enough trained and/or employed Muslim slaughtermen since the market was in its infancy and demand was fleeting.

J&M Company and My Own Meals, Inc. are very active in halal production. IFANCA is establishing halal production and supervising standards for various products. Together, we offer you this book as the first in a series of standards manuals to be issued as the market evolves in order to facilitate an understanding among producers of what halal standards mean and how to comply with them. Producers failing to meet these minimum standards will likely face challenges both domestically and internationally. The certification activity is one of the first segments of the halal infrastructure being created by Muslim organizations to assure that producers understand what is required to comply with halal standards.

This manual is from a producer's practical perspective, utilizing the halal standards IFANCA and others require. A company does not have to be owned, run or operated by Muslims to produce halal products. However, any product

destined for halal labeling must be produced under the strict supervision, assistance, counsel and participation of trained and competent Muslim production inspectors. It is the company's responsibility to find trained Muslim inspectors and to comply with the requirements. It is the marketer's responsibility to assure the reputation of the Muslim supervising organization contracted to do the certification.

A. Introduction - The Goal and Purpose of Halal Supervision

The word *Halal* means "proper and permitted." Halal food is permitted by Allah (God) for Muslim consumption. *Dhabiha Halal* refers to meat and poultry properly slaughtered by a Muslim according to Islamic rituals. The word *Haram* means "prohibited" or "forbidden" by Allah for Muslim consumption. Foods not prepared or processed using halal standards are forbidden to be consumed, just as would be alcohol or pork.

From a producer's perspective, these concepts are important to remember. Not only must the ingredient be reviewed for permissibility, but also suppliers of the ingredient must be Muslim approved as halal. This is because many ingredients may be from a variety of sources, including meat-based sources. Creating and approving a supplier network is time-consuming but may save a great deal of time later in the production and planning processes. Given the evolving market, it may be necessary and prudent to establish halal processes at a few key supplier locations, particularly those connected to meat/poultry and related ingredients.

B. Halal Supervision and Inspection

Finding and hiring a reputable *Halal supervisory organization* and properly trained *on-site Halal inspectors and supervisors* are critical for current and future business dealings. Very few organizations meet these requirements. Look to these organizations as any other potential business partner. Evaluate what value they bring to the operation, including their reputation, which provides acceptability to the consumer.

In the past, many companies hired individual untrained local Muslims to supervise and certify their production practices as a means to meet the minimum requirement of having a Muslim associated with the production. This imprudent practice threatens the success and acceptability of production. There may be benefits in working with a local Islamic certifying group by training them in specific production systems so that they may become a better supervisory organization.

Inspectors and supervisors require training not only in religious teachings, but also in production quality and control, product flow systems, cleaning, and the proper use of the production equipment. Training must include a working knowledge of ingredients and potential suppliers. For production locations running both non-halal and halal products, additional experience is required. Both the supervisory organization and the inspectors must have an experience base to properly establish procedures to assure that the cleaning and production control systems are adequate (including systems from receiving, storing, and producing through to end-item packaging).

B-1. Qualifications of Inspectors and Supervisors

Inspectors and supervisors must be Muslims, actively practicing their faith with a committed spirit and working knowledge of halal requirements as stipulated in the Qur'an and the Sunnah (teachings of Prophet Mohammed). Both must have demonstrated practical knowledge of food preparation according to halal practices and requirements. Such practical knowledge usually comes from experience in the production of food similar to that being produced. For example, experience requirements differ for restaurants, commercial kitchens for caterers, a USDA production facility, etc.

Supervisors are usually men. However, women trained and qualified to perform such functions are not specifically excluded from assuming these duties.

B-2. Training of Inspectors and Supervisors.

Inspectors and supervisors must receive adequate training in each of the following areas, and such training must be documented. Training shall be provided by any or all of the following: the supervising organization; a credible organization hired to provide such training; or another supervising organization with which the inspectors and supervisors previously worked and whose training is approved by the supervising organization.

Some of the areas to be covered in training:

- a. Halal requirements as stipulated in the Qur'an and Sunnah
- b. Working knowledge of the product(s) under its supervision

- c. Production facility layout, management practices and policies
- d. Production processes for non-halal products (where appropriate) and for products and where and why differences exist
- e. Machinery and production methods and standards (on-the-job under a trained supervisor is appropriate)
- f. Labeling format(s), design(s), statements, etc. acceptable to the supervising organization
- g. Handling and packaging aspects of the facility
- h. Industry practices for that particular product(s) market
- i. Professionalism and maintaining control over documents, processing areas, packaging, etc.
- j. Maintaining of logs and records of production to assure only those items produced as halal are labeled as halal and only approved vendors and ingredients are used for production.

halal

B-3. Requirements for the Supervising Organization

The supervising organization is charged with the full responsibility for training and performance of its inspectors and supervisors, and must perform any and all testing of inspectors and supervisors to assure that they are adequately trained, knowledgeable of the halal requirements, and have demonstrated reliability, professionalism and ability.

The supervising organization arranges insurance and compensation considerations with the producer.

Every supervising organization must have a religious authority either on staff or on a consulting arrangement. The religious authority must be disclosed to the producer and to any consumer or customer requesting this information. This religious authority, together with the experience of the supervising organization, contributes to the credibility and reputation of the supervising organization. It also provides information as to preferred practices, particularly related to slaughtering procedures and ingredient approval.

The supervising organization must maintain detailed records of:

- a. Documented and approved production and packaging standards, procedures and practices. Only such approved methods should be used by any facility.
- b. Experience and training of inspectors and supervisors.
- c. Packaging materials and labels used by production facility.
- d. Surprise inspection visits and findings during such visits.
- e. Violations of accepted practices and policies and resolution.
- f. Control over use of organization's name and trademarks. Should the supervising organization decide to no longer certify the producer or any part or all of its products, the supervising organization must cancel authorization of the producer's right to use of its name and/or trademarks on those product(s). The organization must then take reasonable care to

key customers or consumers that such items are no longer under supervision as halal. When end users are consumers, such as restaurant or store, reasonable care should be taken to inform in the area of such a change.

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C. Meat and Poultry - Dhabihah Halal

C-1. Species acceptable (halal) for consumption

Generally, goats, beef, lamb, rabbit, buffalo, deer, cattle, camels and giraffes are acceptable animals for consumption. Permitted birds include turkey, chicken, fowl, hens, geese and ducks.

The most noted exclusion of common meat sources is pork. Pork and all pork-derived ingredients come from swine. Swine is considered unfit for consumption by all Muslims and is *haram*. It is also *haram* to raise, trade, transport or in any way derive benefit from pork or pork by-products.

Also excluded are all animals considered "beasts of prey having talons and fangs," such as lions, wolves, dogs, cats, tigers, hyenas, foxes, jackals. Domesticated donkeys are also excluded. Excluded birds which "prey on the flesh of dead animals" include vultures, crows, eagles, falcons, pelicans and other scavengers. In addition, the milk and eggs of prohibited species are similarly prohibited for consumption.

In all cases, any animal which is not properly slaughtered as discussed below may not be consumed. This includes improperly slaughtered animals as well as animals that die on their own from disease, altercations with other animals or human cruelty.

C-2.Slaughtering Practices - A Humane and Spiritual Process

It is permitted to consume certain animals, provided the animal is given proper treatment and appreciation for its role in continued human existence. Care must be taken to reduce pain and suffering to a creature which will be slaughtered for sustenance.

At the *moment of slaughter*, the *tasmiyah* and *takbir* blessings are said over each animal or bird by a trained, religiously observant Muslim slaughterman. Saying a blessing after slaughter, solely at the beginning of the slaughter process, over the telephone, or on a pre-recording are unacceptable practices. All products produced under these methods are unacceptable. Any representation that they may be halal is mislabeling. The blessings must only be uttered and supervised by a religiously observant Muslim in person.

C-3.Requirements for inspectors, supervisors and slaughtermen

Individuals assuming these roles must be educated and have experience in halal slaughtering practices. Any Muslim actively involved in slaughter must have experience in proper halal slaughter procedures. They must assure they use an extremely sharp knife and sharpen it often enough to keep it sharp. They must swiftly cut the esophagus, trachea and jugular veins to rapidly release the blood and prevent pain or torture to the animal. The spinal column must not be cut, whether using mechanical or hand slaughter. The supervising organization is charged to assure only properly trained inspectors, supervisors and slaughtermen are permitted to participate in this phase of production.

C-4.Unacceptable practices

Some producers label meat products as halal when these products are in fact not halal. It is possible that they may innocently believe they are following the "rules" to label the meat as halal. It is also possible that there is little concern other than marketing and sales driving these decisions.

When a meat product is labeled as halal with no reference to the certifying organization, the chances are high that the meat is mislabeled. A producer looking for halal meat as an ingredient must not assume that a meat item labeled as halal is indeed authentically halal. To be certain, request a halal certificate for each lot of meat to be used. Since meat is the most critical ingredient, the supervising organization must evaluate the supplier or recommend another supplier.

As advice to the producer buying halal meat as an ingredient, we caution you to take extra care in the area of meat. With every order, confirm the acceptability of the supplier. However, if your supervising organization states that there is only one acceptable meat supplier in the U.S., we recommend seeking an alternative supervising organization. This is an evolving supplier network today, surrounded by issues and problems. Be flexible and cautious as it evolves. If something does not seem right, it probably is not right. For the next few years, do not be surprised if you find your company together with your Muslim supervisory organization setting up halal standards at a supplier to get what you need.

Disallowed slaughtering practices: Under no circumstances is it permissible to:

- Say a blessing only at the start of the slaughtering process (but not throughout the process).
- Say a blessing only after all slaughtering is completed to cover all the animals slaughtered that day.
- Use recordings of blessings to substitute for the devotion of an observant Muslim.
- Accept the word of the slaughterhouse that humane methods were used and therefore should be *considered* the same as halal.
- Accept that a product labeled as halal is indeed produced as halal.

- Label a meat product as halal if there is no on-site Muslim participation.
- Simultaneously process any pork or pork derived product while producing halal-labeled meat.
- Processing any pork or pork-derived product immediately prior to the processing of any halal-labeled product without a full, comprehensive and cleaning. (See Section N in Production Guidelines below.)

detailed

C-5. Production practices and standards

It is imperative that the slaughter method used be done in a humane manner to avoid the infliction of unnecessary pain and suffering on the animal. The animal may not be mutilated, cut or maimed while alive. It may not be bludgeoned. It is the responsibility of the slaughterer to take all due care to assure that the animal does not suffer.

The slaughter must be swift with a full frontal cut of the neck, throat (esophagus), wind pipe (trachea). The two jugular veins in the neck must be cut without cutting the spinal cord. The blood of the animal must be thoroughly drained immediately upon slaughter. Only after the animal or bird is dead may the skin, head, feathers and other parts be removed.

Each animal properly slaughtered according to halal standards is identified as halal. Improperly slaughtered animals must not be marked halal. They must be removed and segregated from the halal meat. These carcasses may be sold as non-halal product. Documented and identifiable standards and procedures must be on-hand for each slaughter to assure the supervisor that the animals were not

Only properly prepared, slaughtered and later handled for sale or distribution, but also to assure segregation of dhabihah halal animals from any animal, product or by-product deemed non-halal. Should an animal die in the process of being slaughtered, either by stunning or other methods, prior to halal slaughter as required in this section, the animal is considered carrion and therefore, haram.

Each package must be properly sealed under the supervision of a trained halal supervisor and properly marked as dhabihah halal only under his/her supervision. Any meat products which were not slaughtered under the above standards and/or not prepared and packaged as required by the halal supervisor, may not be labeled as halal.

Methods of Slaughter:

a. Slaughter at the hand of a human

When an animal is slaughtered by an individual, that individual must have received special training, not only on the halal requirements, but also in the methods and procedures required to cause no pain or suffering to the animal(s). This difficult task requires swiftness and strength. The faint of heart or weak must not be permitted to assume such a task. Otherwise, there is a strong probability that the animal will not be swiftly slaughtered. This could cause unnecessary pain and suffering to the animal. In this case, the requirements of halal slaughter may not be met.

Therefore, anyone not properly trained and strong enough to assume the responsibilities associated with the task of slaughter must not be permitted near animals. Should a supervising organization or anyone knowingly permit such a situation, everyone associated with the act will be responsible for the inhumane death of the animal. Specialized training and experience in this area cannot be taken lightly.

b. Mechanical or rotary knife slaughter (used for birds)

Mechanical slaughter, or that slaughter directly performed by machines, is somewhat controversial. Most Muslim countries now accept mechanically slaughtered birds if a trained Muslim, working full-time at the machine utters the proper blessings. A machine is merely a tool to assist the slaughterman, much like a knife in the slaughterman's hand. Provided the machine properly cuts the esophagus, trachea and two jugular veins, this mechanical slaughter can be used. Any birds missed by the machine must be slaughtered by the hand of the Muslim slaughterman. Contact IFANCA for a copy of *Mechanical Slaughtering Procedures*.

C-6. Acceptance of meat slaughtered by Jews or Christians

A slaughter performed by religiously observant Jews or Christians which properly meets all halal blessings and regulations may be used only under restricted and limited conditions. However, when meat slaughtered by Muslims is available, there is no need or reason to accept the slaughter of meat by Jews or Christians and this exception provision does not exist.

Some Muslim families used to purchase meat and then bless it at home before cooking or eating it. In the strictest sense, the blessing must occur at the *moment* of slaughter, so reciting the blessings at home does not change the status of the meat.

D. Fish and Seafood

D-1. Species acceptable as halal

All fresh fish and seafood, including shellfish, are considered halal. Any processing or cooking of fish and products containing fish, require halal approval by a trained halal supervisor prior to being labeled as halal.

D-2. Slaughtering practices

Fish does not need to be slaughtered. However, in no way shall a fish be permitted to suffer. It shall not be bludgeoned or its flesh cut from its body while alive. It shall not be cooked alive. It should be left to die by itself.

D-3. Standards and requirements for supervisors and inspectors

Supervisors and inspectors shall be trained in the practices of fish production.

E. Milk and Dairy Products Such as Cheese

E-1. Yogurt

Yogurt and yogurt products must not contain gelatin, unless that gelatin is determined to be from halal slaughtered animals.

E-2. Cheese

Many cheeses contain rennet and other enzymes that are derived from animals. It is important to assure that these are derived from halal-approved animals or from microbial or plant sources. Other ingredients must also be from plant sources.

F. Fruits and Vegetables

Fresh fruits and vegetables are all considered halal. Processed fruits and vegetables may be unacceptable if they are produced in processing plants using non-halal oils, fats, preservatives, flavorings, colorings etc. The procedures used in producing these items do not require on-site Muslim supervision. However, a prudent producer will work with its halal supervising organization to ascertain that the supplier uses procedures to assure that the halal status of the fruits and vegetables has not been compromised.

In addition, ingredients, or processing aids used in production or filling packages should be evaluated for halal status. Potentially problematic ingredients could be added flavorings, colorants or preservatives. (See Section I below.) Both the suppliers and the products must be approved by the halal supervising organization. Also refer to Section L below related to the halal status of packaging materials.

G. Bread, Breading, Pastries and Cakes

Bakery goods carry particular halal concerns. Breading on products such as fried chicken or cheese sticks or breading used as a "hidden" ingredient in stuffing or fillers may contain potentially questionable ingredients such as fats, oils, flavorings, colors, preservatives, alcohol-based ingredients. It is important to assure that no alcohol-based or animal-based ingredients are used to ascertain halal status.

Refer to *Appendix* for a listing of the halal status of many ingredients.

H. Oils and Fats

Fats are rendered products which must be from halal-slaughtered animals. Haram preservatives or processing aids must not be used in vegetable-based oils.

I. Additives, Colorants, Preservatives

It is important to assure that the additives, colorants and preservatives are from acceptable sources and are processed according to halal requirements without the use of alcohol-based carriers.

Refer to *Appendix* for a listing of the halal status of many ingredients.

J. Alcohol and Alcohol By-Products

Alcohol means ethyl alcohol. All products or ingredients containing alcohol are prohibited in Islam, even for cooking purposes or in fillings in candies. Artificial and natural flavors, colors and some types of meat or vegetable bases may contain alcohol products used to carry the flavor. They would be unacceptable to the requirements of halal. These may be hidden ingredients, so care must be exercised. The supervising organization may need to follow up on processes and ingredients. Note that vinegar, although a by-product or derivative of alcohol, is permitted in Islam. However, it is prudent to avoid the words "wine vinegar" in the label statements in order not to create confusion.

K. Prepared Foods - Complex and Multiple Ingredients

Prepared foods usually contain a wide variety of ingredients. As a result, the supervising organization takes extra care in reviewing and periodically approving supplier sources.

The production plant of complex and multiple ingredient meat-based products, such as soups, stews, prepared meals, etc., must have on-site Muslim supervision and participation. If the plant is producing vegetarian, halal products, but usually produces non-halal, meat-based products, the facility requires specific cleaning and halal preparation processes be performed prior to commencing halal production.

Extra Muslim attention and supervision is required for halal certification of the prepared foods produced. On-site Muslim control and supervision is mandatory for any halal-certified product containing meat.

L. Packaging Materials

Packaging materials are questionable in their halal status. While a plastic, microwaveable container of frozen food may appear acceptable, the source of some of the ingredients used to create the plastics may be hidden. In many cases, stearates are used in the production of plastic containers. Stearates may be of animal-origin.

Metal cans are also suspect. In many cases, the formation and cutting of the cans require the use of oils to aid in their manufacture. Such oils can also be animal-derived.

The supervising organization must investigate and evaluate packaging to determine its acceptability in order to approve food in that particular container. Often, a "melt-down" test is used to determine how much, if any, of the container contains haram ingredients. Producers may use only approved containers and suppliers.

M. Reliance Upon Reputable, Well-Known and Respected Supervising Organization

As halal certification standards evolve, supervisory organizations will be created. Those with consistent standards, organization, documented training and standards will likely last and gain the respect of the Muslim community. Eventually, consumers, as well as foreign customers, will rely upon the certifying organization's standards and reputation to properly determine the halal status of products. Establishing strong, approved halal practices and standards in the production process will facilitate future developments in halal certification and acceptability.

N. Guidelines and Standards for Producers

N-1. Certification Process

For products to be properly labeled as halal, the production facility, along with its management, policies and production practices, must be closely and carefully evaluated by a reputable supervisory organization. Where production practices must be revised to conform to halal standards, a trained Muslim, under the tutelage of a reputable supervisory organization, must assist in implementing the required production practices and changes.

a. For non-complex or dedicated lines where the same processes are used every day, such as in fruit canning plants, little, if any, Muslim supervision is required. Once production practices are documented and established, the trained supervisor does not need to supervise all aspects of production all the time. Future inspectors may arrive unannounced during a planned production

day to test that the documented procedures are in place and being utilized. In this case, the plant and all production may be considered halal all the time, requiring only an annual review and certification letter.

b. For complex products or where halal and/or non-halal meat products are manufactured, the halal-certifying supervisory organization must be informed every time halal production is scheduled. Special cleaning and preparation of equipment and facility are necessary prior to commencing halal production. A trained Muslim

inspector or supervisor must be physically on-site at the commencement of production. He/she must identify and inspect ingredients to be used, confirm packaging and labeling, check and approve cleanliness of the facility and equipment to be used and review halal procedures being followed. Sections N-3 to N-8 relate to requirements for complex production environments.

While an annual certification letter may be issued to the producer, a control listing of lot codes produced under halal supervision must be maintained by the Muslim supervisory organization to attest to the halal status by lot code. Some customers require every batch be certified.

c. For slaughtering facilities, an on-site Muslim supervisor must be present during all phases of slaughter, segregation of halal meat and labeling. Each slaughter is halal certified individually, unless the slaughterhouse is exclusively a halal-slaughtering facility.

N-2. Inspection and approval of plant and production processes

a. Overall plant and production approval. To approve a facility for general halal certification, it must consistently perform the same type of production and produce the same group of approved products using the same ingredients. The Muslim supervisory organization will:

- Review the production facility layout, production procedures, policies and practices. This will involve direct inspection and discussion with plant management and personnel.

- Evaluate management reputation, integrity and reliability.

- Review and approve all ingredients and ingredient-supplier listings.

Procedures must be established whereby all new suppliers or ingredients during the year's certification letter period are approved by the certifying organization before being used.

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halal-

- Approve written procedures for halal-only certified production, which may differ from non-halal certified production.

- Authorize (in writing) how and when the producer may use the Muslim organization's name and halal symbol on its labels or in advertising.

- Make unannounced inspections of documentation and sign-in logs which document when a Muslim inspector was on-site.

- Review sanitation procedures and sanitation chemicals to evaluate adequacy of cleaning.

b. Plant approval where complex products are produced. Complex products include those produced at a facility which produces meat-based halal products. Complex products also include non-meat-based halal products where the facility also produces non-halal meat products for other customers at other times.

- There is to be an on-site Muslim inspection at the commencement of each production run for procedures, ingredients, cleanliness and packaging/label review.

- Whenever a non-certified product is run between halal production runs, an on-site inspector must re-inspect ingredients, cleanliness and packaging.

- The supervisory organization must obtain a production report of what was produced as halal and non-halal during halal production periods, by lot code.

- Packaging control procedures must be in place to assure that only halal-certified production is labeled with halal certification. In this case, an inventory of packaging and labels before and after the production run must be made available upon request by the halal-certifying supervisory organization. Written agreements with packaging suppliers must be made whereby the halal supervisory organization approves all purchase orders for packaging materials where halal certification appears, prior to releasing any packaging materials to the producer.

COMPLEX PRODUCTION PROCESSING REQUIREMENTS

N-3. Preparing for production

A complete and thorough cleaning must occur the day before commencement of halal production. Equipment, piping (CIP cleaned in place or dismantled), feed lines, conveyors, cooking equipment, utensils, buckets, stoves, ovens, kettles, retorts, dollies, totes, barrels and all other equipment to be used for halal production must be thoroughly cleaned and free of foreign material. The inspector will touch and visually inspect. Any remaining food, grease or other materials must be thoroughly cleaned and removed prior to production.

N-4. Documentation required to prove halal status of ingredients

Producers supply the halal-supervising organization with a list of ingredients used for halal production together with all primary or secondary suppliers. A listing of ingredients and suppliers must also be provided to the inspector upon inspection for non-complex products, and prior to commencing the production of complex halal products.

If the inspector finds non-approved alternative ingredients or unacceptable suppliers are being used, production and certification is immediately suspended or revoked unless and until cleared by the supervisory organization.

N-5. Segregation, shipping, storage of ingredients and packaging

Segregating ingredients to be used solely for halal production, such as halal meat, makes it easier for the halal supervisory organization to rely upon management controls than on-site visual inspection of every aspect of production. Even though not required, this practice reduces the possibility of invalidating the halal production by using a non-approved ingredient (especially meat and meat bases). The product could be sold, but not as halal, once the halal status is violated.

There is potential for significant negative ramifications if a non-halal product is boxed in error into a halal-certified box. If packaging inventory variances cannot be explained to the halal supervisory organization, all halal products produced become suspect, which may result in a suspension of halal certification of all halal products in inventory unless and until cleared.

Segregating *sealed* halal and non-halal products in shipping (i.e., LTL common carriers) is unnecessary. However, fresh non-halal meat, which can leak meat juices through packaging materials, should be segregated. If all packages are properly sealed to prevent cross-contamination, there is no need to segregate halal food products from non-halal food products in shipping.

N-6. Additional requirements for plants using pork, lard, pork-derived ingredients for non-halal products

A special cleaning is required in facilities that prepare pork products during non-halal production periods. Under no circumstances may pork production occur simultaneously in the same room with halal-certified production. The plant should be clearly divided so that the pork production is segregated and produced away from the halal production. It may take place in the same facility, just not in the same segregated production section of the plant.

An on-site halal inspector must arrive prior to production, inspect the production area and equipment to be used for halal production which was previously used for pork production to be assured that everything is perfectly clean. In addition, the area and equipment must again be cleaned under Muslim supervision with steam, boiling water or chemicals to thoroughly clean any possible remnants of pork or fat. This cleaning pertains to any surface which will touch halal-processed food, including fillers, kettles, utensils, mixers, etc.

N-7. Halal supervisor's control required over packaging

To assure that only properly prepared products carry halal certification, it is critical to implement controls over packaging and labels so that the manufacturer cannot label non-halal products as halal in error. The supervisory organization must have a written agreement between the company and its supplier(s) of printed packaging and labels that all purchase orders for such materials must carry the approval signature of the supervisory organization prior to shipping to the manufacturer.

The supervisory organization must then keep a reasonable accounting for packaging materials inventory compared with purchases and production (output). Any significant variations require a written explanation of the variance to gain assurance that no non-approved production was labeled as halal.

Under no circumstances may a rubber stamp be used without the prior approval of the on-site inspector. In cases where the facility prints its own labels, a letter attesting to the number of labels printed must be signed by an officer of the company and supplied to the supervisory organization.

N-8. Labeling Requirements

Under no circumstances may a company put the supervisory organization's name and/or symbol on its packages as certified halal unless previously approved in writing by the supervisory organization. Once authorization to use the name and/or symbol has terminated by either time or through de-certification or suspension, all materials containing the halal symbol must be destroyed.

All products labeled as halal should also carry the supervisory organization's name and/or symbol. Products labeled as halal without reference to the certifying organization's name will likely be those products initially under review by the Muslim community's new policing efforts.

APPENDIX

	Food Additive	Functions	Islamic Status
1.	Acetic acid	Acidulant, preservative, flavoring agent	Halal
2.	Adipic acid	Acidulant, flavoring agent	Halal
3.	Agar	Gelling agent	Halal
4.	Albumin	Protein fortifier, binder	Questionable (1)
5.	Algin	Thickening, binding & gelling agent	Halal
6.	Annatto	Color	Halal
7.	Artificial color/flavor	Adds color and/or flavor	Questionable (1)(2)
8.	Ascorbic acid	Vitamin C, dough conditioner, antioxidant	Halal
9.	Aspartame	Sweetener	Halal
10.	Benzoic acid	Preservative	Halal
11.	Beta carotene	Colorant, Vitamin A	Halal
12.	BHA Butylated Hydroxyanisole	Antioxidant	Halal
13.	BHT Butylated Hydroxytoluene	Antioxidant	Halal
14.	Caffeine	Beverage additive	Halal
15.	Calcium caseinate	Protein fortifier, binding agent, whipping agent	Halal
16.	Calcium propionate	Preservative, mold inhibitor	Halal
17.	Calcium silicate	Anti-caking agent	Halal
18.	Calcium stearoyl lactyl	Whipping agent, dough conditioner, emulsifier	Questionable (1)
19.	Calcium sulfate	Calcium source, filler, firming agent	Halal
20.	Caramel	Colorant	Halal
21.	Carrageenan	Stabilizer, gelling agent	Halal
22.	Citric acid	Acidulant, antioxidant	Halal
23.	Cornstarch	Thickener	Halal
24.	Dextrin	Adhesive, flavor carrier	Halal
25.	Diammonium phosphate	Leavening agent	Halal
26.	Dipotassium phosphate	Emulsifier, buffering agent	Halal
27.	Disodium guanylate/inosinate	Flavor enhancers	Halal
28.	EDTA	Sequestrant	Halal
29.	Enzymes	Active additives	Questionable (4)
30.	Erythorbic acid	Preservative	Halal
31.	Ethyl alcohol	Extracting agent	Haram
32.	Ferric orthophosphate	Food supplement	Halal
33.	Ferrous fumarate	Food supplement	Halal

34.	Ferrous gluconate	Food supplement	Halal
35.	Fumaric acid	Acidulant	Halal
36.	Gelatin	Gelling agent	Questionable (3)
37.	Glutamic acid	Flavor enhancer	Questionable (1)
38.	Glycerin	Humectant, crystallization modifier, plastic	Questionable (1)
39.	Glyceryl monolaurate	Emulsifier	Questionable (1)
40.	Glycine	Dietary supplement, rancidity retardant	Questionable (1)
41.	Guar gum	Stabilizer, thickening agent	Halal
42.	Gum base	Gum	Questionable (1)
43.	Hydrolyzed vegetable protein (HVP)	Flavor enhancer	Halal
44.	Isopropyl citrate	Antioxidant	Halal
45.	Lactic acid	Adjusts acidity, flavoring agent, preservative	Halal
46.	Lactylated fatty acid esters	Emulsifiers	Questionable (1)
47.	Lard	Hog fat	Haram
48.	Lecithin (soy)	Emulsifier, dough stabilizer, anti-sticking agent, viscosity reducer, wetting agent	Halal
49.	Magnesium stearate	Lubricant, binder, emulsifier, anticaking agent	Questionable (1)
50.	Maltodextrin	Texturizer, crystallization inhibitor, bulking agent	Halal
51.	Methylcellulose	Thickener	Halal
52.	Methylsalicylate	Flavoring agent	Halal
53.	Monoglyceride and Diglyceride	Emulsifiers, dough conditioners, texture improvers	Questionable (1)
54.	Mono-sodium glutamate (MSG)	Flavor enhancer	Halal
55.	Oleoresins	Color and flavor additives	Questionable (1)
56.	Oxystearin	Crystallization inhibitor, release agent	Questionable (1)
57.	Pectin	Gelling agent	Halal
58.	Phosphoric acid	Acidulant	Halal
59.	Polysorbates	Emulsifiers	Questionable (1)
60.	Potassium citrate	Sequestrant and buffering agent	Halal
61.	Potassium sorbate	Preservative	Halal
62.	Potassium stearate	Binder, emulsifier, plasticizer in chewing gum base	Questionable (1)
63.	Propyl gallate	Antioxidant	Halal
64.	Propylene glycol	Humectant, solvent	Halal
65.	Propylene glycol alginate	Thickener, stabilizer, emulsifier	Halal
66.	Propylene glycol monostearate	Dispersing aid, crystal stabilizer, aeration improver	Questionable (1)
67.	Rennet	Milk coagulant used primarily in cheese	Questionable (4)
68.	Saccharine	Sweetener	Halal
69.	Shortening	Animal or vegetable fats or oils	Questionable (1)
70.	Silicon dioxide	Anticaking	Halal
71.	Sodium acid pyrophosphate	Leavening agent, preservative, sequestrant	Halal
72.	Sodium alginate	Thickener, binder, gelling agent	Halal
73.	Sodium ascorbate	Antioxidant, nutrient	Halal
74.	Sodium benzoate	Preservative	Halal
75.	Sodium bicarbonate	Leavening agent	Halal
76.	Sodium caseinate	Protein fortifier, emulsifier, binding agent, whipping agent	Halal
77.	Sodium citrate	Sequestrant	Halal
78.	Sodium erythorbate	Antioxidant	Halal
79.	Sodium hexametaphosphate	Binding agent	Halal
80.	Sodium lauryl sulfate	Whipping agent, emulsifier	Questionable (1)

81.	Sodium nitrate	Antimicrobial agent, preservative	Halal
82.	Sodium nitrite	Antimicrobial agent, preservative	Halal
83.	Sodium propionate	Preservative	Halal
84.	Sodium silico aluminat	Anticaking and conditioning agent	Halal
85.	Sodium stearate	Binder, emulsifier, anticaking agent	Questionable (1)
86.	Sodium sulfite	Preservative	Halal
87.	Sorbitan monostearate	Emulsifier, surfactant, dispersant	Questionable (1)
88.	Sorbitol	Humectant	Halal
89.	Stannous chloride	Antioxidant, preservative	Halal
90.	Stearic acid	Lubricant, binder, defoamer	Questionable (1)
91.	Stearoyl lactylate	Dough conditioner, emulsifier, whipping ag	Questionable (1)
92.	Sulfur dioxide	Preservative, anti-microbial	Halal
93.	Tallow	Animal fat	Questionable (1)
94.	Tartaric acid	Flavor enhancer, acidulent	Halal
95.	Titanium dioxide	Coloring agent	Halal
96.	Vanilla	Flavorant	Questionable (2)
97.	Vanillin	Flavorant	Questionable (2)
98.	Vinegar	Acidulant, flavorant	Halal
99.	Whey	Source of lactose, milk solids, whey proteir	Questionable (4)
100.	Yeast	Leavening and fermenting agent	Halal
101.	Zein	Coating agent	Halal

- 1) Source may be derived from, or contain ingredients of, animal origin.
- 2) May contain ethyl alcohol which is haram.
- 3) May be derived from pork. If gelatin is from fish or halal-slaughtered animals, it is halal.
- 4) Rennet and other enzymes may come from non-halal slaughtered animals. Whey, a cheese by-product, may be derived from milk curdled with questionable rennet or enzymes.

An Introduction to J & M™ and MY OWN MEAL® brand products

J & M Company and My Own Meals, Inc. produce and market halal certified, refrigeration-free meals, under the Islamic supervision and certification of IFANCA. All meat and poultry used are dhabiha halal certified. All meat-based meals are sold under the brand name of J & M™. All vegetarian meals are sold under the brand name of MY OWN MEAL®.

Meals are packaged in 10 ounce, microwaveable trays for home, office, school lunch, and institutional use with an 18 month shelf life from date of manufacture. Meals are also available in 8 ounce foil pouches with a five year shelf life from date of manufacture, primarily for campers, travelers, and military ration use. Refrigerated storage is not needed since the production process used is similar to the canning process. Other side dish items are being introduced. Meal varieties include:

My Kind of Chicken® Chunks of chicken with brown rice, peas and carrots in a light sauce. A favorite combination!

Chicken Mediterranean™ Enjoy a taste of the Mediterranean! Chunks of chicken, tomatoes, potatoes, chick peas, black olives in a tangy sauce.

Chicken & Black Beans This scrumptious meal with simple spicing has chunks of chicken, black and kidney beans, tomatoes, potatoes, sweet peppers & corn.

Chicken & Noodles A winning combination! Chunks of chicken with Kluski noodles, peas and carrots in a light, deliciously seasoned sauce.

Chicken, Please® A hearty stew with chunks of chicken, potatoes, corn and carrots in a light sauce.

Beef Stew This flavorful stew in a light sauce has chunks of lean beef, potatoes, sweet peppers, tomatoes, cabbage, zucchini, chick peas and carrots.

Old World Stew Known for its aromatic flavors, its chunks of beef with brown rice, tomatoes, zucchini and pinto beans is delicious.

Florentine Lasagna A meal influenced by the tastes of Florence, it has small lasagna noodles, Ricotta and Parmesan cheeses, spinach and pinto beans.

Cheese Tortellini Cheese-filled tortellini are perfect in a thick, seasoned tomato sauce flavored with Parmesan cheese and pinto beans.

Vegetarian Stew A meal fit for vegetarian and hearty eater alike! With macaroni, vegetables, potatoes, barley, lentils, peanuts and seasonings, it has a great taste and a variety of textures.

Pasta With Garden Vegetables This delicious and robust meal has Rotini pasta with a sweet pepper, mushroom, zucchini and tomato vegetable medley. It is perfectly flavored with traditional Italian seasonings.

The above meals are available by mail order nationally by writing to:

J&M Company
PO Box 334
Deerfield, Illinois 60015 USA
Email: sales@halalcertified.com
Website: <http://www.halalcertified.com>

Telephone: 847-948-1290
Fax: 847-948-0468

About the Authors:

Dr. Muhammad Munir Chaudry

A food scientist, Chaudry left his executive technical position at Heller Seasonings to become President of IFANCA in 1984. A Ph.D. in Food Science, Chaudry has actively sought to improve halal production standards in the USA and abroad.

Mohammad Mazhar Hussaini

As a nutritionist who studied Muslim dietary life, Hussaini is the founding President and Executive Director of IFANCA. Hussaini continues to work with dietary concerns in his career and authored several books including, *Islamic Dietary Concepts & Practices* (1993 IFANCA).

Mary Anne Jackson

A former Beatrice Foods Co. executive, CPA and MBA, Jackson founded My Own Meals, Inc. in 1986 and J&M Company division in 1995. During her career at Beatrice since 1978, Jackson worked in accounting, finance, marketing, new product development, operations, and strategic and operations planning.

Dr. Mian Nadeem Riaz

A food research scientist at Texas A&M University in College Station, Texas, Riaz works with IFANCA to increase awareness of Muslim issues specifically related to halal certification. He evaluates the impact halal standards may have on food.

About the Organizations:

J&M Company and My Own Meals, Inc.

Founded in 1986 by Mary Anne Jackson, My Own Meals, Inc. pioneered and created the children's meals market by introducing its line of all-natural, refrigeration-free meals for children. In 1991, Jackson redirected its product and marketing focus to that of kosher and halal meals for both adults and children. Jackson founded J&M Company division in 1995 to market *dhabiha halal* certified meals. In 1996, J&M Company successfully introduced the first halal ration into the US Military ration system, which also included meat meals. J&M Company continues its commitment and strategic emphasis on healthy, refrigeration-free meals. All J&M™ branded products are *halal and dhabiha halal* certified. All vegetarian MY OWN MEAL® products are dual certified both kosher and halal.

For more information, write: J&M Company, PO Box 334, Deerfield, IL 60015 USA

Email: sales@halalcertified.com Website: <http://www.halalcertified.com>

Islamic Food and Nutrition Council of America (IFANCA)

IFANCA was founded and registered in Illinois in 1982 by its Board of Directors with the objective of increasing awareness and understanding of Muslim dietary requirements, standards and regulations. The organization is dedicated to scientific research in fields related to food, nutrition and health. IFANCA provides halal supervision and certification for the production of qualifying products and producers. Its emphasis is on slaughtering, processed meats, foods and kindred products.

For more information, write: PO Box 425, Bedford Park, IL 60499 USA

Halal Industrial Production Standards is the first, single-source document describing halal production standards. Its goal is to define and create consistency in those standards and describe customer expectations of producers seeking halal labeling of products. As the demand for halal products develops, some of the standards may be clarified and modified over time necessitating revisions to this document. Your Muslim supervisory organization will clarify and provide more detail to this book. However, only when a document exists can it be changed.

The Market for Halal Food Products

The market for properly certified and labeled, halal food products is in its infancy in the United States today. Domestic demand is limited. Halal production has been almost exclusively for exported meat products. For many reasons, including competition, international customers are becoming less accepting of halal labeling and requiring more information about the processes used. And the small domestic market is becoming vigilant and vocal in what it will and will not accept as it grows over the next decade.

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