

Hidden Ingredients in Halal Foods



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Outline

Halal Food Additives Control

- What are food additives?
- Sources of food additives
- Market of food additives
- Why use food additives?
- Are All food additives are Halal?
- Examples of food additives
- Control of Halal food additives



What are Food Additives ?

Halal Food Additives Control

Food additive is defined by the Food and Drug Administration (FDA) as any substance used to provide a technical effect in foods



What are Food Additives ?

Halal Food Additives Control

The use of food additives has become more prominent in recent years, due to the increased production of prepared, processed, and convenience foods.



What are Food Additives ?

Halal Food Additives Control

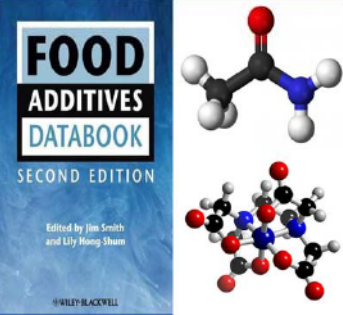
Food additives are added to food to preserve flavor, improve its taste or nutrition value, appearance, freshness and safety



What are Food Additives ?

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There are approximately 3000 food additives in different groups, that are being used by the food industry



Groups of Food Additives

Acids	Acidity regulators	Anticaking agents	
Antifoaming agents	Antioxidants	Bulking agent	
Food coloring	Color retention agents	Emulsifiers	
Flavors	Flavor enhancers	Flour treatment agent	
Glazing agents	Humectants	Tracer gas	
Preservatives	Sequestrant	Stabilizers	Sweeteners
Surface active agent	Thickeners		

Global Food Additives Sector Hits \$24.5 Billion

September 14, 2011 0 Comments

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SURREY, England—Growing demand for functional foods and beverages that help consumers improve diet, health and well-being are driving growth in the \$24.5 billion global food additives market, according to new market data from Leatherhead Food Research. The sector grew 4% in 2010, with modest growth expected to continue over the next few years.

According to "The Global Food Additives Market, 5th Edition", improving overall health and the desire for natural ingredients are key factors driving demand for a host of additives including emulsifiers, hydrocolloids, sweeteners, vitamins and minerals, soya ingredients, omega-3 fatty acids, probiotics, prebiotics and plant stanol esters. Consumer demand for natural food and drink products also is forcing additive suppliers to develop ingredients from natural sources for the flavors and colors categories.

Enzymes, acidulants and hydrocolloids are experiencing the highest growth rates in the food additives sector due to increased material and energy costs. While preservatives and sweeteners are seeing the lowest growth rates as many manufacturers are moving away from using artificial additives and ingredients.

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Home • Food Technology • Daily News • Global food additives market to exceed \$33.9 B by 2015

Global food additives market to exceed 33 B by 2015

Global Industry Analysts Inc. (GIA) has released a global report on food additives market that shows that the world market for food additives is projected to exceed \$33.9 billion by the year 2015.

June 8, 2010

Global Industry Analysts Inc. (GIA) has released a global report on food additives market that shows that the world market for food additives is projected to exceed \$33.9 billion by the year 2015. The factors playing a prominent role in the growth of the food additives market include adoption of sophisticated food processing methods by developing countries, restructuring of food processing companies, and a demand for more complicated food ingredients by processors.

Global market review of food and drink additives - forecasts to 2012

2007 edition

Are All Food Additives are Synthetic?

Halal Food Additives Control

Additives may be **Natural**, **Nature identical** or **Synthetic**

Natural additives are substances found naturally in a foodstuff and are extracted from this food to be used in another, for example beet root juice with its bright purple color can be used to color other foods such as sweets



Are All Food Additives are Synthetic?

Halal Food Additives Control

Additives may be **Natural**, **Nature identical** or **Synthetic**

Nature identical additives are manmade copies of substances that occur naturally. For example, benzoic acid is a substance that is found in nature and is made synthetically and used as a preservative



Are All Food Additives are Synthetic?

Halal Food Additives Control

Additives may be **Natural**, **Nature identical** or **Synthetic**


Artificial additives are substances made synthetically and are not found naturally. An example is azodicarbonamide, a flour improver that is used to help bread dough hold together



Sources of Food Additives ?

Halal Food Additives Control

Some consumers may not be able to know the sources of these additive and have no idea why these additives are in the foods?



Xanthan gum 200 mesh

Why Use Food Additives ?

Halal Food Additives Control

Food additives are added to foods to perform a specific function

- Preserving the food
- Increasing the shelf life
- Slowing the growth of micro
- Changing the appearance or taste
- Help in processing, binding, etc



Why Use Food Additives ?

Halal Food Additives Control

Some food companies uses additives to make food appear fresher and more colorful to attract customers







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Harmful food additives turn pork into 'beef'
Source: Globaltimes.cn [16:24 April 13 2011] Comments

Harmful food additives, which can change both pork's appearance and taste into those of beef, have been found in markets in Hebei, Anhui Province, the Anhui News reported on Wednesday.

According to local residents, the 'beef extract,' which can also turn chickens into 'beef,' is frequently used in little shops and snack bars.

An owner of a spice store told a reporter that the 'beef extract' should be used with the combination of another spice called 'mahru' so as to reduce the fishy smell of pork.

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Turn Pork to Beef? China Seeks Strict Ban on Additives



China Daily US, News Report, Guo Qianxin, Posted: April 22, 2011

GUANGZHOU - The State Council called for stricter regulation of the use of food additives on Thursday in response to a series of food safety problems, one of which led to the recent seizure of 16 tons of contaminated pork in Guangdong province.

The announcement required the Ministry of Health to revise a list of legal food additives and make it public by the end of this year.

Meanwhile, the ministry will make a blacklist of illegal additives. Persons or companies must not use such additives in their products, or they will face

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Why Use Food Additives ?

Halal Food Additives Control



Why Use Food Additives ?

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Homocysteine Egg
Cholesterol Egg
Cyanide Egg
Hormone Egg
Antibiotic Egg
Cholesterol Egg
Cyanide Egg
Hormone Egg

Antibiotic Egg
Cholesterol Egg
Cyanide Egg
Hormone Egg
Antibiotic Egg
Cholesterol Egg
Cyanide Egg
Hormone Egg

Are Food Additives Safe?

Halal Food Additives Control

Some food additives are Safe
Some food additives are banned due to the safety problem such as causing cancer and obesity etc.



Killer Food Additives

Are Food Additives Safe?

Halal Food Additives Control

- With the increasing use of processed foods
- There has been a great increase in the use of food additives of varying levels of safety
- This has led to legislation in many countries regulating their use



Food Additives

Generally Safe

Annatto	Beet juice	Beet powder	Beta-carotene
or carotene	Citric acid	Erythorbic acid	Gelatin
Guar Gum	Herbs and spices	Lactic acid	Lecithin
Minerals	Natural oils/extracts (vanilla extract)		
Natural Sweeteners	Pectin	Sea salt	Sodium
bicarbonate (a.k.a. baking soda)	Sorbic acid		
Vegetable glycerin	Vitamins	Yeast	

Food Additives in E. U

Halal Food Additives Control

In the European Union food additives have number codes called E-numbers

E101
Riboflavin (vitamine B2) colorant

1

- 100-199 Food colors
- 200-299 Preservatives
- 300-399 Antioxidants, phosphates, and complexing agents
- 400-499 Thickeners, gelling agents, phosphates, humectants, emulsifiers
- 500-599 Salts and related compounds
- 600-699 Flavor enhancers
- 700-699 Not used for food additives (used for feed additives)
- 900-999 Surface coating agents, gases, sweeteners
- 1000-1399 Miscellaneous additive
- 1400-1499 Starch derivatives

Are All Food Additive are Halal?

Halal Food Additives Control

Some food additives are **Halal**

Some food additives are **NOT**

Some food additives are **Doubtful**

E-HALAL

Liste des additifs.

⚠	E103	Unknown	⚖	🇺🇸
✓	E104	Halal	⚖	🇨🇭
✓	E107	Halal	⚖	🇨🇭
✓	E110	Halal	⚖	🇨🇭
⚠	E111	Unknown	⚖	🇨🇭
⚠	E120	Doubtful	⚖	🇨🇭
✓	E121	17/639	⚖	🇨🇭
✓	E122	Halal	⚖	🇨🇭

Examples of Halal Food Additive

Halal Food Additives Control

Citric acid
Halal Certified



OC(CC(=O)O)C(=O)O

Xanthan gum



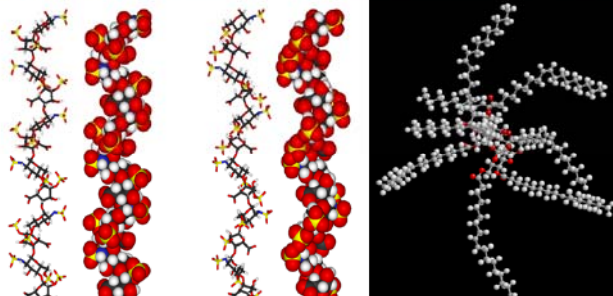
C1C(C(C(C(C1O)O)O)O)O



Halal Certified

Examples of Doubtful Food Additive

Halal Food Additives Control




The image displays four molecular models of food additives. On the left, there are two ball-and-stick models of long-chain molecules, one in a zig-zag conformation and one in a more compact, folded conformation. To the right, there is a single, more complex branched molecular structure.

Examples of Doubtful Food Additive

Halal Food Additives Control

- What's in your morning bagel, croissants, pita bread or rolls?
- It may contains either human hair or duck feathers
- It's your guess as to which?
- The substance, called L-cysteine or cystine,
- Used as a dough conditioner to produce a specific consistency



The image shows a white plate with a silver fork resting on it. Several strands of brown hair are tangled on the plate, illustrating the source of the L-cysteine additive.

Examples of Doubtful Food Additive

Halal Food Additives Control

Human Hair Protein in Commercial Breads... omg!



The image is split into two parts. The left part shows a close-up of a thick, dark, curly strand of human hair. The right part shows a stack of three slices of golden-brown, soft-looking bread.

Examples of Doubtful Food Additive

Halal Food Additives Control

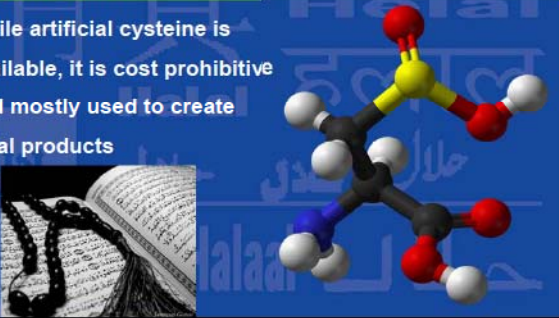
Commonly L-Cysteine is made from human hair and duck feathers



Examples of Doubtful Food Additive

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While artificial cysteine is available, it is cost prohibitive and mostly used to create halal products



Additives in Cosmetics

Halal Food Additives Control



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Hidden Food additives

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Several food additives are not mentioned on the label

- Releasing agent



Hidden Food additives

Halal Food Additives Control

- Antifoaming agent

Anti-foaming agent found in Chicken McNuggets

Posted by Ashlee on June 22, 2011 at 11:30am [View Blog](#)



(NaturalNews) Ever wonder what's really found in Chicken McNuggets? Some of the ingredients, it turns out, seem to belong more to an industrial factory of some kind, not a food retailer. According to the McDonald's Corporation, its famous Chicken McNuggets are made with ingredients including saturated yeast extract (which contains free glutamate, similar to MSG), sodium phosphates and sodium aluminum phosphate. But that's not the freaky part. According to McDonald's own website, Chicken McNuggets are also made with "hydrogenated soybean oil with TBHQ and citric acid added to preserve freshness" and "Dimethyl polysiloxane added as an antifoaming agent." (<http://nutrition.mcdonalds.com/nutr...>)

At least two of these ingredients are artificially

Hidden Food additives

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- Filtering agent



Hidden Food additives

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- Clarifying agent

Gelatin For Beverage Clarifying Agent

US\$ 2.3 - 5/Kilogram
 FOB Price [Get Latest Price](#)
 Prod. Singapore
 Minimum Order Quantity: 1 Metric Ton/Metric Tons
 Supply Ability: 100 Metric Ton/Metric Tons per Month
 Payment Terms: L/C,TT
 Ms. Osama Ne

Hidden Food additives

Halal Food Additives Control

- Flavor Enhancers

Sweetness Enhancer

REPLACES SUGAR IN FOODS AND BEVERAGES. IT IS A SWEETENER THAT DOES NOT CAUSE CARIES. IT IS A SWEETENER THAT DOES NOT CAUSE CARIES. IT IS A SWEETENER THAT DOES NOT CAUSE CARIES.

amyl acetate, amyl butyrate, amyl valerate, anethol, anisyl formate, benzyl acetate, benzyl isobutyrate, butyric acid, cinnamyl isobutyrate, cinnamyl valerate, cognac essential oil, diacetyl, dipropyl ketone, ethyl acetate, ethyl amyl ketone, ethyl butyrate, ethyl cinnamate, ethyl heptanoate, ethyl heptylate, ethyl lactate, ethyl methylphenylglycidate, ethyl nitrate, ethyl propionate, ethyl valerate, heliotropin, hydroxyphenyl-2-butanone, a-ionone, isobutyl anthranilate, isobutyl butyrate, lemon essential oil, maltol, 4-methylacetophenone, methyl anthranilate, methyl benzoate, methyl cinnamate, methyl heptane carbonate, methyl naphthyl ketone, methyl salicylate, mint essential oil, neroli essential oil, nerolin, neryl isobutyrate, orris butter, phenethyl alcohol, rose, rum ether, g-undecalactone, vanillin and solvent

Hidden Food additives

Halal Food Additives Control

- Enzymes as Processing Aids

Table 12.1 A Sampling of Major Sources of Enzymes

Source	Type	Activity	Uses
Bacteria	Bacillus	Protease	Meat, beverages
Bacteria	Streptomyces	Isomerase	Beverages, starch
Fungi	Aspergillus	Protease	Cheese
Fungi	Mucor	Lipase	Cheese, fat
Yeast	Saccharomyces	Invertase	Cocoa
Yeast	Kluyveromyces	Chymosin/rennin	Cheese
Plant	Barley/malt	Amylase	Bakery, sugar
Plant	Papaya	Papain/protease	Bakery, beverages
Animal	Bovine liver	Catalase	Beverages, dairy
Animal	Ruminants	Rennin/protease	Cheese
Animal	Pig/cattle stomach	Pepsin/protease	Cheese, cereals

Enzymes as Additives or Processing Aids in Food Biotechnology

Enzymes in Food Processing

Edited by M. Nadeem Riaz, M. Nadeem Riaz, M. Nadeem Riaz

Hidden Food additives

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- Bleaching compounds



FOOD ANTISEPTIC POWDER

FOOD BLEACHER

FOOD AND VEGETABLE PRESERVATIVE LIQUID

FOOD ADDITIVES

Hidden Food additives

Halal Food Additives Control

- Food Grade Lubricants



FOOD-GRADE LUBRICANTS

GIA & NSF approved incidental contact oils, greases and aerosols

RELEASE-ON

ULTRACHEM INC



ARCHINE Foodcare AC2

JAX FOOD GRADE ANTI-SEIZE

C.I. FORMULA 6-77 FOOD EQUIPMENT LUBRICANT

DOORLESS - TASTELESS CONTAINS NO SILICONES

NET WEIGHT: 453 g / 16 oz.

Hidden Food additives

Halal Food Additives Control

- Edible Coating



Hidden Food additives

Halal Food Additives Control

- Packaging Material
 - In many cases, stearate from animals might be used in the production of plastic bags and containers
 - Metal cans and drums can be contaminated with animal fats
 - Waxes and coatings applied to plastic, paper and styrofoam cups and plates might be from animal origin





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Science News

Hidden Phosphorus Food Additives Dangerous To Kidney Disease Patients

ScienceDaily (Feb. 10, 2009) — Advanced kidney disease patients have a list of foods they know to avoid because they naturally contain a high level of the mineral phosphorus, which is difficult for their compromised kidneys to expel. But researchers from MetroHealth Medical Center and Case Western Reserve University School of Medicine in Cleveland have discovered that a great deal of processed and fast food actually contains phosphorus additives which can be just as dangerous for these patients.

High blood levels of phosphorus can lead to heart disease, bone disease, and even death among patients with advanced kidney disease. This is

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SEARCH

Staying Healthy
MSG Added To Thousands Of Processed Foods; May Be Cause Of Numerous Health Symptoms

Jennifer Castor, 7NEWS Video Journalist

POSTED: 10:48 am EST February 17, 2012
UPDATED: 9:30 am EST February 18, 2012

DENVER -- Processed foods are convenient and plentiful. Many of us eat lots of them.

Megan Windel was no exception. Every day she ate foods from boxes and bags. Foods she thought were healthy like low fat yogurts, soups, breads and occasional diet sodas. But, after eating them she started noticing nagging stomach aches. They got progressively worse.

"It was pretty sharp abdominal pain and a lot of days it was pretty debilitating," said Windel. That pain was often matched with headaches and overall malaise.

Hidden Food additives
Halal Food Additives Control

Label show **yeast extract** and **natural flavor**

- Both are legal terms
- Yeast extract could be from brewery waste and could contain flavor enhancers


Hidden Food additives
Halal Food Additives Control

- This label show flavor enhancer's e-number
- But it contain, **herb extract** and **yeast extract**
- Both extract could contain several **flavor enhancers**

Hidden Food additives

Halal Food Additives Control

- This label show natural flavors, yeast extract, spice extract
- What is the source of these ingredients?



What is the Solution

Halal Food Additives Control

- To make sure food is Halal all the additives including:
- Releasing agent
- Antifoaming agent
- Filtering & clarifying agent
- Bleaching compounds
- Flavor enhancers
- Packaging material
- Greases and lubricants

Need to be Halal certified



Key message

Halal Food Additives Control

- Several food additives and other processing aid can pose an issue for Halal
- Halal certification for all these ingredients may be the only solution
- We all need to work on these issues so all the Muslims make sure they are eating Halal food

