

The Unlawful Ingredients in Food

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The issue of what to eat and what not to eat has explicitly been defined in the Quran and Sunnah. By default anything that is wholesome and nourishing (*tayyab*) and lawful (*halal*) is allowed.¹ The items that are forbidden are the flesh of pig (swine), flowing blood, dead animals, anything that is dedicated/slaughtered in the name other than AllahST 2, and alcohol.³ It is also forbidden to eat a lawful animal if it is not slaughtered in the name of AllahST.⁴ According to the Holy Prophet^{SAW}, it is unlawful to eat wild animals with a canine tooth and birds with talons.⁵

The conventional wisdom is that if the food has any unlawful ingredient, it becomes unlawful. Books have been written documenting the ingredients in commonly used items ranging from toothpaste to mouthwash. Muslims spend a great deal of their time reading ingredients while doing grocery shopping. Every now and then we will receive a call or an e-mail about things which had been considered lawful becoming unlawful overnight. It just happened to be that the ever-cautious eyes overlooked the presence of unlawful ingredients in the food. A recent case is that of cheddar cheese chips which had listed enzyme as an ingredient. Someone did some investigation and proclaimed that the source of the enzyme is pork. News spread like a wild fire, a chain of e-mail started flying around and telephones started ringing. Luckily Frito Lay laid the issue to rest by assuring the customers that the source of the enzyme is not pork.

Those of us who have migrated from Muslim countries remember the good old days back home when we never bothered about this issue. We ate whatever we wanted without looking at or questioning the ingredients. But here in the United States, we have to look at the ingredients before we buy anything. Even when we think that we have done our homework, it is not enough for a Muslim guest, who happens to be pious. He or she takes full liberty to open our kitchen cabinet and check the ingredients again to make sure we have not overlooked anything. I have observed many instances when a person was about to put a morsel of food into his or her mouth and someone proclaimed that the stuff is haram. Imagine how you would feel in that situation. Here you were about to enjoy that delicious food and now you were put in an impossible situation. If you eat, then you become a transgressor of the divine law. If you do not, then you will be yearning for that stuff all day long.

Quantity is Important:

As mentioned earlier, it is the conventional wisdom that just the presence of the unlawful ingredient makes the whole food unlawful. What is missing in this whole debate is the quantity of the unlawful substance and the source of that substance. Before passing any judgment on any food, we should not only look into the presence of unlawful ingredients, we should also investigate how much of it is present in the food and what is the source of that ingredient. The scholars of the past might not have articulated this principle in those words, but they certainly used it in passing judgment. We all know that flowing water is considered to be clean (*tahir*). It is based on the assumption that the unlawful contaminants e.g. urine or feces present in water at certain location are continuously being diluted by fresh water to an extent that the flowing water should be considered clean. The unlawful contaminants are not absent from the water being used. The

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quantity of undesirable contaminants is assumed to be so small that it does not affect the cleanliness of the water.

In the past when wells used to be the source of water and if some dirty animal, for example a dog or a rat, fell in the well, the scholars recommended drawing out certain number of buckets of water from the well to make the well water clean. They certainly knew that by pulling out so many buckets, the same number of buckets of fresh water will be drawn into the well and will dilute the unlawful contaminants to an acceptable level. Had their objective been a complete absence of the unlawful contaminants, they would have recommended digging a new well. I will discuss few items in this respect to make the point.

Alcohol:

We all know that wine is made from grape juice. It is a chemical reaction in which sugar is converted into alcohol. The reaction is called fermentation. The fruit juice by definition contains sugar and is prone to fermentation. A freshly squeezed orange juice can contain as much as 0.03 percent alcohol in it.⁶ My personal analysis of a freshly prepared orange juice from concentrate showed the alcohol content of 0.005 percent. The alcohol content in a refrigerated orange juice after two weeks showed the alcoholic content of about 0.15-0.25 percent. With time the alcohol content in juice increases. The fresh orange juice which had only 0.005 percent alcohol, showed about 1.5 percent alcohol after staying at room temperature for four days. The amount of alcohol depends upon time and temperature of storage. As a matter of fact, wine making is a selective spoilage of juice to make alcohol. No scholar has declared juice unlawful. We all drink juice in breakfast and in Iftar that could contain alcohol and only discard it when it is spoiled or is past its expiration date.

The alcoholic content of most of the alcoholic beverages ranges from 3 percent to 60 percent by volume.⁷ For example, the alcoholic content in beer ranges between a little less than 3 percent and almost 30 percent by volume, in wine between 8.5 percent and 14 percent, and in distilled beverages (spirit) between 35 percent and 60 percent. It is generally believed that distilled spirits were first produced between the 8th century AD and 9th century AD in the Middle East. The high alcoholic content (30 percent by volume) in beer is a recent phenomenon, since typical brewing yeast cannot survive at alcohol concentrations above 12 percent by volume. It is therefore safe to speculate that the alcoholic beverages that were in use during the revelation of the Quran were beer and wine with an alcoholic content ranging between a little less than 3 percent to 14 percent by volume. Thus the conventional usage of the term alcoholic beverages and the potential presence of alcohol in juices would suggest that any drink that contains a little less than three percent or more alcohol will fall under the category of alcoholic drink and will be unlawful.

The lesson to be drawn from the alcoholic content of juice and alcoholic drinks is that it is not the presence, but the quantity of the unlawful ingredient in the food that will determine if the food is lawful or unlawful. The intent of this argument is not to make a drink containing less than three percent alcohol lawful. The intent is to derive a principle of when a substance becomes unlawful. Sheikh Qaradawi suggests an upper limit of 0.5 percent.⁸ He ruled there was no religious ban on consuming drinks with a minute amount of alcohol in them if it was formed naturally through the process of fermentation. This rule is derived from the sayings of the Prophet^{SAW} that if drinking a lot of alcohol makes you intoxicated then drinking a little is also forbidden. The statement of the Prophet^{SAW}

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also implies that if drinking a large quantity of a drink which contains alcohol in it does not cause intoxication, then it is not forbidden.

Cheese:

The basic ingredients in cheese are milk, starter culture and or natural acids, and rennet. Typical milk contains 87.4 percent water by weight, 3.5 percent fat, 3.5 percent protein, 4.9 percent lactose, and 0.7 percent minerals.⁹ Cheese making is the process of removing water from dairy milk. Soft cheeses like cream cheese contain more water than a hard cheese like cheddar. Very dry cheeses like parmesan contains all most no water.

The bacteria, called starters, cause the milk protein to coagulate into curd which is the solid protein of milk. The bacteria also provide flavor and character to the finished product. Rennet is an enzyme which acts on protein and causes it to coagulate. There are two sources of rennet enzyme. Animal rennet is an enzyme which is extracted from the fourth stomach of calves and vegetable based rennet. Normally about quarter teaspoon each of bacteria and rennet is added to two gallons of milk to make cheese. This amounts to about 0.13 percent each of the two in water free cheese.

Based on the lessons learnt from the analysis of orange juice, we can say that the concentration of the enzyme (rennet) in cheese is not much different from the amount of alcohol in juice and should not make the cheese unlawful.

The presence of unlawful substances in such a small quantity (less than one percent) in edible items should not make the item unlawful.

Intent also counts:

There is a famous Hadeeth: "Actions are but by intention and every man shall have but that which he intended."¹⁰ When I drink juice, the intention is to drink juice. However, if I intentionally age the juice for fermentation and then drink it, then I am violating the law. Even if the alcoholic content is less than three percent, since my intention is to have an alcoholic flavor, I am violating the law. Similarly, if I sprinkle bits (less than one percent) of pepperoni on the cheese pizza for flavor, it will still be unlawful because of the intent. On the other hand, when I am eating cheese pizza, which has been sliced by a knife that was previously used to cut pepperoni pizza, my intention is to enjoy the cheese pizza, not the traces of pepperoni, which might have become attached to the pizza while it was being cut with the contaminated knife. The contaminated knife should not make the cheese pizza unlawful to eat.

Dominant Taste and Flavor:

All the living organisms must eat in order to survive. AllahST has placed in all the living organisms a trigger called hunger to insure their survival. All the living organisms eat when they feel hungry. While hunger forces us to eat, what we eat is triggered by taste and flavor. We eat what taste good and has a good flavor. That brings us to another criterion for the lawfulness of a substance. In the previous discussion, based on the alcohol content in juice and alcoholic drink, we set a limit of one percent. We stated that if the unlawful contaminants are less than one percent, they should not make the edible item unlawful to eat. However, in the pepperoni on pizza example we also made the point that that even when the amount was less than one percent, but since it was added to get the flavor of pepperoni, it should be unlawful to eat. Since it is the flavor and taste of the substance that drives us to choose what we eat, they become the drivers for our

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intent. Thus, even if the quantity is small (less than one percent), if the dominant flavor or taste is that of the unlawful substance, it should be unlawful to eat.

The Source of the Substance:

It is also not necessary that if a material is derived from an unlawful substance, the derived substance becomes unlawful. Take for example vinegar. It is made from juice by fermentation. During the processing, juice first turns into wine and then into vinegar. While juice and vinegar are lawful, wine is unlawful. In other words wine which is the fermentation product of juice is unlawful and vinegar which is the fermentation product of wine is lawful. It is thus the composition of the substance and not the source of the substance that makes a substance lawful or unlawful.

Mono and Diglycerides:

Mono and diglycerides are used as emulsifiers in foods and in the preparation of baked goods.¹¹ They are made from fatty acids or raw or hydrogenated oils¹² or from fat and oil themselves.¹³ Fatty acids are derived from animal fat and oil. Technically, oil and fats are triglycerides, and fatty acids, as the name implies, are acids.¹⁴ As mentioned earlier, the sugar in juice converts to alcohol to become wine and the alcohol in wine converts to acetic acid when wine becomes vinegar. Similarly the triglycerides convert to fatty acid and mono and diglycerides. Fatty acid can also be converted into mono and diglycerides by reaction with glycerol. Just like the chemical nature of sugar in juice, alcohol in wine, and acetic acid in vinegar are entirely different, the chemical nature of triglycerides, fatty acid, and mono and diglycerides are entirely different. Although wine is unlawful, vinegar, the product of wine is lawful. Similarly although fat obtained from pig is unlawful, mono and diglycerides, a product of fat should not be unlawful, because mono and diglycerides by themselves are not unlawful. Had they been unlawful, mono and diglycerides derived from oil would also have been unlawful.

Conclusion:

Food and drink should not be considered unlawful because of the presence of unlawful substance in it. The intent, the quantity of the unlawful substance and how it affects the taste and flavor of the food and drink should be the determining factor. Similarly a substance should not be considered unlawful simply because it is derived from an unlawful substance. If the chemical nature of the substance has changed, and the new substance itself is not unlawful, it should be considered lawful.

About the Writer:

The writer has authored "Secrets of Angels, Demons, Satan, and Jinns – Decoding their Nature through Quran and Science," and "Atom to Adam – How, When and Where in the Light of Quran, Bible and Science (A Study of Human Origin)," both published by InstantPublishers.com (<http://instantpublisher.com/>) and "Lessons from the Qur'an," published by Ta-Ha Publishers (<http://www.taha.co.uk/>). These books are available from Amazon.com (<http://www.amazon.com/>) and Ta-Ha Publishers (<http://www.taha.co.uk/>), respectively. He has also published many essays on religious issues in the Charleston Gazette, West Virginia and written quite a few Islamic satires. He is a Chemical Engineer and possesses Master of Science degrees in Chemical Engineering and Chemistry and has Professional Engineers license from the State of Texas. His e-mail address is mnajawaid@yahoo.com.

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¹ O you people! Eat of what is on earth lawful and good; and do not follow the footsteps of the evil one for he is to you an avowed enemy. For he commands you what is evil and shameful and that you should say of Allah that of which you have no knowledge. (2:168-169)

O you who believe! Eat of the good things that We have provided for you and be grateful to Allah if it is Him you worship. (2:172)

² He has only forbidden you dead meat and blood and the flesh of swine and that on which any other name has been invoked besides that of Allah but if one is forced by necessity without willful disobedience nor transgressing due limits then is he guiltless. For Allah is Oft-Forgiving Most Merciful. (2:173)

Say: "I find not in the Message received by me by inspiration any (meat) forbidden to be eaten by one who wishes to eat it unless it be dead meat or blood poured forth or the flesh of swine for it is an abomination or what is impious (meat) on which a name has been invoked other than Allah's." (6:145)

Forbidden to you (for food) are: dead meat blood the flesh of swine and that on which has been invoked the name of other than Allah that which has been killed by strangling or by a violent blow or by a headlong fall or by being gored to death; that which has been (partly) eaten by a wild animal; unless you are able to slaughter it (in due form); that which is sacrificed on stone (altars); (5:3-4)

³ O you who believe! Intoxicants and gambling (dedication of) stones and (divination by) arrows are an abomination of Satan's handiwork: eschew such (abomination) that you may prosper. (5:90)

⁴ So eat of (meats) on which Allah's name has been pronounced if you have faith in His Signs. (6:118)

Why should you not eat of (meats) on which Allah's name has been pronounced when He has explained to you in detail what is forbidden to you except under compulsion of necessity? (6:119)

Eat not of (meats) on which Allah's name has not been pronounced: that would be impiety. But the evil ones ever inspire their friends to contend with you; if you were to obey them you would indeed be pagans. (6:121)

The sacrificial camels we have made for you as among the Symbols from Allah: in them is (much) good for you: then pronounce the name of Allah over them as they line up (for sacrifice): when they are down on their sides (after slaughter) eat you thereof and feed such as (beg not but) live in contentment and such as beg with due humility: thus have we made animals subject to you that you may be grateful. (22:36)

⁵ On the day of Khaybar the Apostle of Allah (peace be upon him) prohibited eating every beast of prey, and every bird with a talon. (Abu Dawood 3796, also 3797)

The Apostle of Allah (peace be upon him) said: " ----, every fanged beast of prey, and every bird with a talon are forbidden for you." (Abu Dawood 3797)

Referring to the day of Khaybar, Safinah reported that Allah's Messenger (peace be upon him) declared domestic asses, the flesh of mules, every beast of prey with a fang and every bird with a talon to be unlawful. (Tirmidhi 4129, ghareeb)

⁶ Tropicana, Consumer Relations (personal communication).

⁷ <http://en.wikipedia.org/wiki/Wine>

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<http://bendbrewfest.com/index.php?page=glossary>

⁸ Story from BBC NEWS: http://news.bbc.co.uk/go/pr/fr/-/2/hi/middle_east/7342425.stm,
Published: 2008/04/11 10:45:06 GMT

⁹ <http://www.leeners.com/cheesehow2.html>

¹⁰ Imam Nawawi's Collection of Forty Hadeeth (Hadeeth Number 1).

¹¹ Kirk-Othmer Encyclopedia of Chemical Technology, Volume 12, John Wiley & Sons, New York, 1994, p. 692.

¹² *ibid.* p. 692.

¹³ Kirk-Othmer Encyclopedia of Chemical Technology, Volume 10, John Wiley & Sons, New York, 1994, pp. 252-255.

¹⁴ *ibid.* pp. 252-255.