



# KASHRUS KURRENTS

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## THE SHEITEL CONTROVERSY



**RABBI MORDECHAI FRANKEL**  
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Which pilgrimage site is the most visited around the world? While some may guess the Vatican (approximately 7 million visitors a year) or Mecca (10 million), few would fathom that one of the contenders for the title is a remote Indian temple located on one of the Tirumala hills near the town of Tirupati in the state of Andhra Pradesh.

An estimated 25 million Hindu pilgrims visit the temple each year – an average of 68,500 visitors daily. Although this seems like a huge number of pedestrian traffic, it is worth noting that, as a percentage of the Indian population, this would correspond to approximately 1,650 visitors were the site in the U.S.

What do the visitors do in Tirupati? They wait in line all day to get a glimpse of the *avodah zara* in the temple for a few fleeting seconds. Another popular activity is *tonsuring*, the act of shaving one's head for religious purposes. Approximately 30,000 visitors are tonsured daily.

### THE BUSINESS OF HAIR IN TIRUPATI

Tonsuring is done on the temple grounds, in a large building separate from the one housing the *avodah zara*. The barbers work in four shifts, with 400 barbers per shift, cutting hair around the clock. The temple collects the hair and sells it, earning more than \$6 million a year.

The shorn hair has a variety of uses, including:

- The extraction of amino acids, including L-cysteine, through hydrolysis, for use in the cosmetics and pharmaceutical industries
- Mixed with other fibers to create stuffing for use in mattresses, furniture, clothing and the like
- Woven to create weaves and hair extensions, which constitutes a surprisingly large industry
- Of particular concern to Orthodox consumers: sold to wig manufacturers to produce sheitels

### THE ORIGINAL TESHUVA OF HARAV ELYASHIV

In 1989, a halachic question was posed to Rav Yosef Shalom Elyashiv zt"l. Is a Jewish woman allowed to wear a sheitel possibly containing hair bought from that temple, or should the temple hair be classified as an offering to *avodah zara* that one is forbidden to have benefit from?<sup>1</sup>

To answer that question, it is necessary to know why pilgrims donate their hair at that temple. This question was posed to Dr. Anand Mohan, a Hindu priest who teaches at Queens College CUNY. He explained that by shaving one's hair, a person surrenders his ego and vanity to the *avodah zara*.

<sup>1</sup> Koveitz Teshuvos 1:77.

CONTINUED ON PAGE 2

## THE PLOT THICKENS:



## THE MARVEL OF COLLAGEN



**RABBI AVRAHAM MUSHELL**  
STAR-K KASHRUS ADMINISTRATOR

From fruit-on-the-bottom yogurt cups to your Bubby's famous galarita (a.k.a. p'tcha), collagen – and its modified form, gelatin – seems to be everywhere these days. It is no exaggeration to state that the food and health industries are currently undergoing a veritable collagen craze. In 2023, the collagen market had a value of \$5.1 billion with no signs of slowing down; it is projected to top \$7.4 billion by 2030.<sup>1</sup> What exactly is collagen and why is it so popular?

Collagen is a fibrous, insoluble protein found in all living beings. The word *collagen* comes from the Greek word *kolla*, meaning glue, which is a fitting term for a substance that makes up a major portion of bone, skin and connective tissue and serves as the glue that holds the body together. There are three main types: type I, found in skin, tendons, bones and ligaments; type II, found in cartilage; and type III, found in skin, muscles and blood vessels.

Cooking the bones helps to release the collagen in them and to thicken the cooking liquid. That is the basic recipe for p'tcha, and it also explains why you may find jarred gefilte fish suspended in a wobbly jelly.<sup>2</sup> But commercially produced collagen for industrial use is a more complex process.

### THE WIDESPREAD UTILITY OF GELATIN

The collagen in animal bones, hides and cartilage are typically extracted through enzymatic or acid/alkali hydrolysis, and then purified and dried. Gelatin is a partially hydrolyzed form of collagen. The word *gelatin* is derived from the Latin word *gelatus*, meaning stiff or frozen; its stiffness is

<sup>1</sup> See <https://www.marketsandmarkets.com/Market-Reports/collagen-market-220005202.html>.  
<sup>2</sup> Note that the longtime use of gelatin in commercial gefilte fish has given way to gelatin substitutes, such as carrageenan (see sidebar page 5).

CONTINUED ON PAGE 4

# THE SHEITEL CONTROVERSY

CONTINUED FROM PAGE 1



Based on this explanation, Rav Elyashiv ruled that the sheitels are permitted. He argued that the hair itself is not being offered to the *avodah zara*. Tonsuring is an act performed prior to the viewing and worshipping of the *avodah zara* and is intended to serve as a subjugation of one's ego.

Additionally, the tonsuring is not performed in the presence of the *avodah zara*, as Hinduism considers the hair to be impure, and it may not be brought into the building containing the *avodah zara*. Furthermore, Rav Elyashiv explained that for halachic purposes, the intent of the haircut is defined by the one performing the act of haircutting and not by the one getting the haircut. Even if ignorant pilgrims do intend to offer their hair to the *avodah zara*, the barbers who work there are presumably more knowledgeable and better informed about Hindu theology, and they do not share that intention.

## FOUR QUESTIONS

Rav Elyashiv stressed that this *psak* was contingent on the accuracy of the information presented to him. Subsequently, people with knowledge of Hinduism contended that the hair should be considered an offering to the *avodah zara*.

Much discussion ensued, centering around four basic questions:

- 1 Does tonsured hair fall into the halachic category of *tikroves avodah zara* (an offering to *avodah zara*) that one is forbidden to benefit from?
- 2 What is the intent of the barbers and pilgrims who tonsure hair at this temple?
- 3 What is the likelihood that hair of unknown origin comes from this temple?
- 4 What is the halachic status of an object, such as a wig made from hair of unknown origin, which may or may not contain hair sacrificed to *avodah zara*?

Of these four questions, the first and last are of a halachic nature, whereas the middle two are factual questions.

## QUESTION 1: THE ISSUE OF TIKROVES

An offering to an idol is referred to by Chazal as a *tikroves avodah zara*. One is prohibited from deriving benefit from both *avodah zara* and *tikroves avodah zara*, and the Rambam writes that doing so would transgress two *issurim d'Oraysa* (Torah prohibitions).<sup>2</sup> *Tikroves avodah zara* is actually more stringent than *avodah zara* because it is prohibited forever, unlike an *avodah zara* which a non-Jew can *mevatel* (annul) – if an *avodah zara* is nullified, a Jew may benefit from it.<sup>3</sup> Therefore, *tikroves avodah zara* hair remains forbidden even when sold and sewn into a wig.

To be categorized as a *tikroves*, the offering to *avodah zara* must have some similarity to an activity performed in the Beis Hamikdash. For example, if a person places loaves before an *avodah zara* as an act of worship, they become a *tikroves* due to their similarity to a *korban mincha*.<sup>4</sup>

If he places a wooden stick in this manner, it does not become a *tikroves* as there is no equivalent *korban*. However, the Gemara states that if the person breaks a stick before an *avodah zara* as an act of worship, it would become a *tikroves*. This is because the action of breaking has

some similarity to the act of *shechita* performed in the Beis Hamikdash, which separated the head of the animal from its body.<sup>5</sup>

It is debatable whether cutting hair should also be viewed as similar to *shechita* in that it separates hair from the head, or whether it should be viewed as a different action.

Rav Yisroel Belsky zt"l argued that since at the time of the cutting the hair is attached to the person, and the person does not make himself a *tikroves*, the hair cannot become a *tikroves* either. Furthermore, he added that the barbers are well aware that the hair is going to be sold for everyday use. They engage in mundane conversations with each other while cutting the hair, which indicates that they are not involved in worshipping the *avodah zara* at that time.<sup>6</sup>

It should also be noted that Chazal indicate that the act of worship is only considered a *tikroves* if it is performed in front of the *avodah zara*. There is discussion in the *poskim* regarding the parameters of this requirement. Tonsuring in Tirupati occurs in a separate building, in the general vicinity of the *avodah zara*. Although the actual *avodah zara* is in a different building, there are photos of the *avodah zara* on the walls in the tonsuring area. It is debatable whether this is sufficient for the tonsuring to be considered as occurring "in front of the *avodah zara*."

## QUESTION 2: DETERMINING THE INTENT OF THE BARBERS AND PILGRIMS

In 2003, Rav Elyashiv sent Rav Aharon Dovid Dunner *shlit"a*, an Av Beis Din in London, on a fact-finding mission to India. He interviewed several pilgrims, some of whom told him that they were shaving their hair as an offering to the *avodah zara*. Evidently, subjugation of one's ego was not the sole reason for the tonsuring.

It seemed likely that this was also true for the barbers. Rav Dunner returned and relayed the information to Rav Elyashiv, who then wrote a second *teshuva* in which he *paskened* that the hair is a *tikroves avodah zara*. He noted that there is mention in Chazal that the idol named Kemosh was worshiped with hair offerings. Evidently, this is a time-old method of worshipping *avodah zara*, and we should assume that nothing has changed.<sup>7</sup>

Over the years, a number of *Yidden* have visited Tirupati to assess the situation. They hired professional translators to speak with non-English-speaking pilgrims; they also interviewed English-speaking Hindus. The responses were recorded and transcribed.

Once again, some of the pilgrims stated that they were offering their hair to the *avodah zara*. People knowledgeable about Hinduism continue to contend that considering tonsure to be an offering to *avodah zara* is a fundamental misunderstanding of the nature of Hindu worship. The dichotomy between Hindu theology and the actual responses of pilgrims has been noted by academic scholars.

Benjamin J. Fleming is an expert in Hinduism and was the Indic Manuscripts Specialist at the University of Pennsylvania for many years. He suggests that for the pilgrim, tonsuring is a small part of a larger schema. The person takes a vow; upon its fulfillment, he visits the temple and cuts his hair and is then granted access to the *avodah zara*.

2 Rambam, *Avodah Zara* 7:2.

3 *Avodah Zara*, daf 50a. See Taz (*Yoreh Deah* 139:4) for the reason.

4 *Tosafos Avodah Zara* 50b, dibur *hamaschil* "ba'inun."

5 *Avodah Zara* 50b.

6 *Shulchan HaLevi*, *Birurei Halacha*, *siman* 28.

7 *Koveitz Teshuvos* 3:118.

NOTE: The information in this article was based on too many sources to include here. For readers who wish to explore this topic more deeply, the author has uploaded links to many of them on the STAR-K website. They can be accessed here: <https://www.star-k.org/articles/kashrus-kurrents/16164/sheitel-controversy-addl-info/>



Fleming writes, “For the Jews who [watched] the ritual, moreover, the focus was solely on the question of the status of the hair. In response to their question, devotees may have spoken of hair only as it bears on the broader symbolic complex, namely, the vow and its fulfillment.”<sup>8</sup> Whether this explanation fully accords with the statements of the pilgrims is debatable.

It is possible that some pilgrims intend to offer their hair to the *avodah zara* whereas others do not. It is also entirely possible that the distinction between offering one’s ego and offering one’s hair does not exist for Hindus in India who are unfamiliar with our way of thinking.

### QUESTION ③: DETERMINING THE SOURCE OF WIG HAIR

Although it is hard for us to imagine, in India there are millions of people who live a hand-to-mouth existence and who survive by picking through garbage. According to reports, India has more than four million ragpickers. Some of them specifically collect hair from combs and waste bins. One to three days of collected hair may yield a 500-gram hair ball, which can be sold for approximately \$7. Others make a few dollars by separating and sorting the collected hair into strands of different lengths.

India is the largest exporter of human hair in the world. How much of that is temple hair? British anthropologist Emma Tarlo has spent years researching the wig industry, and is the author of a 2016 book, *Entanglement: The Secret Lives of Hair*. She estimates that discarded combings make up about 70% of the Indian hair export, while temple donations make up the other 30%. She also claims that a significant majority of exported temple hair is used for hair extensions, rather than for wigs.

Others claim that a larger percentage comes from the temple, especially the long hair used to make wigs. Rav Elyashiv wrote that he was informed that 75% of the hair exported from India was temple hair (although he added that his *psak* was not contingent on that being accurate). However, Rav Belsky challenged that statistic and responded that most of the exported hair was not temple hair.

It should be noted that there is a significant difference between temple hair and waste hair. When a pilgrim tonsures his or her hair at the temple, the hair is cut in one sitting and the hair’s scaly cuticles remain aligned from root to point. Those cuticles will be retained when a wig is made from that hair. However, the cuticles of waste hair are not aligned, and the hair is chemically stripped of cuticles during wig hair processing.

Sam Hong is the founder of Bohyme, a brand that sells hair extensions and wigs. He created the term *Remi* to market hair with unidirectional cuticles. The term became widely used in the industry. Temple hair is Remi hair, which is worth more than non-Remi hair.

Pilgrims who tonsure their hair do not receive any monetary compensation. However, there are many desperately poor women in India who sell their hair to earn a few dollars, and there is an industry of collectors who buy such hair. This hair is Remi hair, although it is not temple hair.

Furthermore, India is not the only country that exports hair. A reporter for NBC News interviewed women in Cambodia. One woman said that hair traders paid her \$25 for her waist-long hair. She sold her hair again, but that time it was not as long, and she received only \$15. She used the money to pay the \$8 monthly tuition for her child’s school.

Other countries that are reported to have such businesses include China, Laos, Thailand, Vietnam, Mongolia and Myanmar. In fact, exploitation is possible wherever there are poor people. A few years ago, there were press reports about four Siberian girls between the ages of 11 and 13 who sold their hair for 70 rubles each.

The human hair industry is largely unregulated. Hair which is shipped from India to China may be sold as Chinese hair. Chinese hair which is shipped to Brazil may be sold as Brazilian hair. There are experts who claim that they can differentiate between countries of origin by examining hair, but this seems to be largely unproven. The hair undergoes a significant amount of chemical processing before it is sold to wig manufacturers, making subsequent identification difficult.

How much of the hair on the world market is from India and how much is from other countries? As the processors routinely hide the country of origin, it is hard to know for sure, although it is generally agreed that most of the hair used in the wig industry is from India.

### QUESTION ④: WIGS OF UNKNOWN ORIGIN

Seemingly, one strand of *tikroves avodah zara* hair in a sheitel would be sufficient to forbid wearing the sheitel. This is because *tikroves avodah zara* does not become *batel* (nullified) when mixed with similar permitted items.<sup>9</sup> If a random strand of hair was plucked from that sheitel and inserted into a different sheitel, that second sheitel would also be forbidden. A possible counterargument is that the wearer does not get any benefit from one strand of hair. She is not benefiting from *tikroves avodah zara*, as it would make no difference to her whether that one strand was present or not.

If we accept the contention that temple hair is *tikroves avodah zara*, then wearing a sheitel made from such hair would be an *issur d’Oraysa*. But how about a sheitel made from hair of unknown origin? The hair may or may not be temple hair - it is a *safeik* (area of doubt). Here we should apply the principle of *safeik d’Oraysa l’chumra*, which means that we rule strictly when there is doubt regarding a Torah prohibition. If that were the case, it would be forbidden to wear sheitels containing hair of unknown origin.

However, there is a halachic concept of *sfeik sfeika*. This means that if there are two areas of doubt, then we rule leniently. In our case, we have two areas of doubt. There is doubt whether the hair was sourced in India or in another country. Even if it could be established that the hair was sourced in India, there is doubt whether it is temple hair or not. The principle of *sfeik sfeika l’kula* should allow us to rule leniently. A possible counterargument is that there is essentially only one basic *safeik*: is it temple hair or is it not?

These arguments and responses are relevant to the *poskim* who conclude that temple hair is *tikroves avodah zara*. However, Rav Belsky and others who do not accept the contention that the hair is *tikroves avodah zara* allow all sheitels.

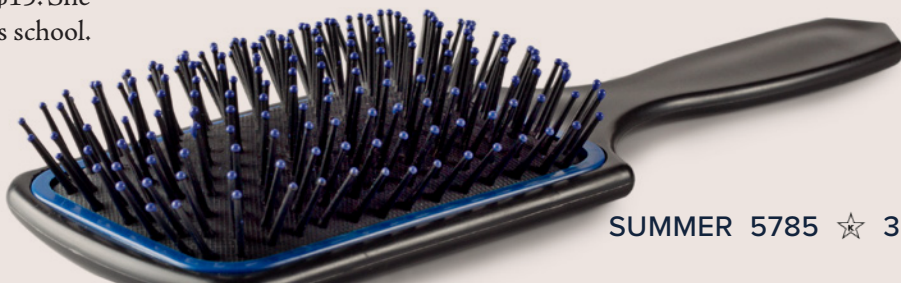
### THE DEBATE CONTINUES

Recently, a *kol korei* was issued forbidding sheitels of unknown origin. It was signed by numerous prominent American *roshei yeshiva*. When *poskim* issue a decision on a contentious issue, they invariably write *teshuvos* explaining the halachic rationale for their *psak*.

We eagerly await further *teshuvos* on this issue. In the meantime, each person should ask his or her own *rav* for guidance. ☆

8 Benjamin J. Fleming and Annette Y. Reed, “Hindu Hair and Jewish Halakha,” *Studies in Religion/Sciences Religieuses* 40:2 (2011), pp. 199–234.

9 Rambam *Avodah Zara* 7:9.





# THE PLOT THICKENS: THE MARVEL OF COLLAGEN

CONTINUED FROM PAGE 1

measured in units called *bloom*, a term credited to its inventor, Oscar T. Bloom. Different applications require different bloom levels. For example, *high bloom* refers to a high molecular weight, and gelatin with high bloom has a stiffer consistency.

Gelatin is a popular additive in foods because it is fat-free yet offers a smooth “mouth feel” that is similar to fat, making it ideal for use in products like low-fat ice cream and yogurt. Gelatin also acts as an emulsifier, which helps to distribute fat and add stability to confections and products like spreadable frosting, ice cream, toffee and yogurt. The addition of gelatin can extend the shelf life of candy because it does not break down as quickly as sugar, making it ideal for throat lozenges, gel desserts and Gummy Bears. Similarly, hard sugar glazes will stay white and not run when gelatin is added. When aerated, gelatin retains its shape to create light and fluffy marshmallows.

In vitamins and medicines, gelatin is used to coat tablets to mask a bitter taste and to produce gelcaps to house powdered medicines. Health-conscious consumers may use plain gelatin as a protein supplement.

## HALACHIC CONSIDERATIONS OF COLLAGEN AND GELATIN

Clearly, gelatin is an industrial marvel and an incredibly useful ingredient in the manufacture of many processed foods and confections. But the kosher consumer faces a dilemma when encountering foods containing gelatin, since most gelatin is made from animal products derived from non-kosher or non-kosher-slaughtered animals.

As mentioned earlier, gelatin is made by extracting collagen from the bones and skins of animals, and the skins or scales of fish. There are several questions that must be addressed in order to understand the halachic status of gelatin.

According to halacha, the meat of animals or fish designated as *tamei* (i.e., from a non-kosher species), such as pigs, horses, catfish and shark, may not be consumed. So, too, the meat of an animal that is *tahor* (i.e., from a kosher species) but was not slaughtered according to the laws of *shechita* is a *nevela* and also prohibited.

Knowing these laws, a host of questions arise:

- 1 Do these prohibitions also apply to the *bones* and *hides* of the animal?
- 2 If the prohibitions of *nevela* and *tamei* were to apply to the skins and bones, can their status be altered through the process used to manufacture gelatin?
- 3 If the animal source for the gelatin is kosher, does the gelatin retain the properties inherent to its source? Namely, is such gelatin considered a meat product when sourced from an animal, rendering it forbidden to be cooked with milk or, if fish-sourced, can it be cooked with meat?

Let's briefly address these questions one-by-one and see what our *poskim* have to say.

## 1 KOSHER STATUS OF ANIMAL HIDES AND BONES

The question of whether or not the bones of a non-kosher animal carry the same prohibition as the meat is discussed by Chazal.<sup>3</sup> The Shulchan Aruch maintains that the bones of a prohibited animal are kosher and count as part of the permitted food in constituting a majority of sixty kosher parts. The Rema concurs that the bones are not prohibited but holds that they do not count as part of the kosher percentage when mixed with other kosher food.

On the other hand, the Shach distinguishes between bones that retain some moisture and those that are totally desiccated. He holds that bones of non-kosher animals that retain any fluids are not kosher; only dry bones are accepted as kosher. According to some rabbinic authorities, collagen is contained within the natural liquid of bones, which the Shach prohibits.

It is worth noting that the Shulchan Aruch refers only to the actual bone and not to the bone marrow, which is considered to be meat. Furthermore, kosher bones processed with non-kosher meat or bone marrow are rendered non-kosher.

The halacha according to the *poskim* is clear: in order to produce gelatin from a non-kosher animal bone, the bone must be cleaned and dried and contain no marrow or soft tissue. Gelatin manufacturers would need to strictly adhere to these requirements. We cannot assume that their manufacturing process is sufficient to produce a gelatin which rabbinic authorities would consider kosher. Then, too, there is the Shach's opinion that the collagen in the bone is prohibited as part of the animal's fluids. For all of these reasons, most reputable kosher certifying agencies prohibit the consumption of gelatin from a non-kosher animal.

Even sourcing gelatin from a kosher animal poses logistical problems. Aside from the prohibitions of *tamei* and *nevela*, as previously noted, we are concerned with the prohibition of *treifa* – the Torah's prohibition of consuming animals that possess certain injuries or disorders. Since most inspections conducted to determine if the animal is *treifa* occur *after* the slaughter and skinning of the animal, the hides must be tracked to ensure that *treifa* hides are not mixed with kosher hides. For this reason, gelatin productions require meticulous supervision.

Finally, as with any kosher food, gelatin must be produced on kosher equipment. When the processing is done in a non-kosher plant (as is usually the case), the equipment must be thoroughly cleaned and kosherized before the production can begin.

## 2 EFFECT OF PROCESSING ON THE STATUS OF MEAT

In reference to the question as to whether or not the processing alters the status of the meat, we may cite a similar question discussed in the Gemara.<sup>4</sup> It used to be a common practice to make cheese curd by adding the skin of a calf's stomach to the milk,<sup>5</sup> or by letting the milk sit in a calf's stomach. According to the Rema, the cheese was permitted only if the stomach had been salted and dried so that it resembled a piece of wood before the milk was added. The Shach cautions that although one may use such milk products, it is not proper to do this *l'chatchila*.

The Pri Megadim qualifies the Rema's leniency by noting that his *psak* applies specifically to the stomach of an animal, which contains less meat flavor. He adds that the Rema allowed this only when the stomach was removed from the milk within 24 hours and was not heated with the milk. If the stomach stays for a period of over 24 hours, or if it is heated with the milk, it would absorb the meat flavor which would render it forbidden for use.

These statements were made in reference to dried kosher meat parts, and did not carry other prohibitions. The fact that they were dried prevented them from attaining a prohibited status when mixed with milk. This may not be the case when the source is not kosher. There is a rule that states, “that which comes out of a non-kosher source remains non-kosher.” If so, the by-products of a non-kosher animal retain their non-kosher status, and processing does not change that status.

3 Y.D. 99:1.

4 Y.D. 87:10.

5 i.e., from a kosher-slaughtered, *non-treifah* animal.



### 3 RELATIONSHIP OF GELATIN TO ITS SOURCE

As to the question regarding whether hides are considered to be meat, Rav Moshe Feinstein *zt"l* addressed this issue in *Igros Moshe*,<sup>6</sup> where he writes that according to Torah law, the hides are not considered to be meat but, according to rabbinic law, they are prohibited to be cooked with milk.

If the hides are dried and processed, however, the resulting gelatin is not included in this rabbinic prohibition. Therefore, gelatin produced from kosher-slaughtered animal hides may be intentionally used with milk. This ruling would only apply to hides that were cleaned to remove any meat residue. Some *poskim* disagree with Rav Moshe's conclusion, most notably Rav Aharon Kotler *zt"l*, who concludes that gelatin produced from kosher hides is considered to be a meat product.

There is room for leniency, however, when dealing with products that contain gelatin sourced from kosher hides, as gelatin has little or no taste. When mixed with other pareve ingredients, the gelatin is nullified, which would result in a pareve product.<sup>7</sup> Gelatin from non-kosher hides, however, retains its forbidden status.

We have not addressed the question of blood in or on the hides. We know that blood is prohibited for consumption by Torah law – this is why we salt our meats prior to cooking. There is a question about the potential presence of blood that may be absorbed in the hides, which would need to be removed. To satisfy all opinions, kosher hides must be salted prior to processing.

With regards to fish gelatin, the source material must be from a kosher species. The use of fish gelatin with meat foods poses an interesting question. The Shulchan Aruch prohibits the cooking of meat and fish together due to health concerns.<sup>8</sup>

Does gelatin extracted from fish carry this restriction? We tend to be more stringent when dealing with possible health issues than with concerns of *issur* (prohibited substances). Therefore, there is a question among the commentaries as to whether or not the rule of *batel b'shishim* (one-in-sixty nullification) applies to unhealthy substances as it does with prohibited substances.

There are many reasons for leniency in the use of fish gelatin together with meat. Many rabbinic authorities hold that the nature of foods in our times may have changed, thus rendering the mixture of meat and fish no longer unhealthy.<sup>9</sup>

Furthermore, there is an opinion that not all fish would be considered a *sakana* when mixed with meat. It may be that only *binita*, the species mentioned in the Gemara, is unhealthy.<sup>10</sup> It may also be posited that the unhealthy aspects of fish cooked with meat are only found in the flesh. Since gelatin is made from the skins and/or the scales, it may not have fish flavor nor harbor the harmful effects of fish.<sup>11</sup>

With this same reasoning, we can say that fish gelatin can be *batel* (nullified) with a majority of other food ingredients and can be eaten with meat. For these reasons, some authorities allow the use of products containing fish gelatin with meat; therefore, they also allow products containing animal gelatin to be served with fish. Harav Moshe Heinemann *shlit"a*, however, is stringent and holds that one should not eat meat together with items made with fish gelatin, such as marshmallows.

#### THE BOTTOM LINE

Gelatin produced from a *tahor* species of animals or fish that was properly processed – kosher slaughtered, internally checked (and, in the case of an animal source, salted) and produced using kosher equipment – may be used by the kosher consumer.

## GELATIN SUBSTITUTES

Widely available gelatin substitutes provide kosher consumers with sound alternatives to meat- and fish-based gelatin products. They are also making headway in the field of vitamin and medicinal capsules.

#### Popular gelatin alternatives that are seaweed-based include:

- ▶ **Agar Agar/Kanten:** Derived from some species of red algae. Has strong setting properties similar to gelatin. Will gel at room temperature. Is more affected by acidity than gelatin and thus can cause fruity desserts to turn watery.
- ▶ **Carrageenan/Irish Moss:** Is a reddish-purple seaweed. Less stiff than Agar Agar. Useful as an emulsifier and a thickener.

#### Gelatin alternatives that are vegetable-derived and that can be used as stabilizers, emulsifiers, or thickeners include:

- ▶ **Gellan Gum:** Produced by the microbial fermentation of a carbohydrate using the bacterium *Sphingomonas elodea*. Requires reliable kosher certification to verify that the ingredients used in their processing are all kosher and that the equipment used for their processing are all kosher *parve*.
- ▶ **Guar Gum:** A legume commonly found in Pakistan and India. Its *kitniyos* status is debated.
- ▶ **Gum Arabic/Gum Acacia:** Derived from the sap of acacia trees found in the Sudan and West Africa. Processing involves spray drying the gum to make it into a powder. Requires reliable kosher certification, as spray drying equipment may be dairy or non-kosher due to previous productions.
- ▶ **Gum Karaya/Sterculia:** Obtained from the tree *Sterculia urens*, which is native to India. Processing is similar to the one used for Gum Arabic, above.
- ▶ **Locust Bean Gum:** Made from carob beans which grow on trees native to the Middle East and the Mediterranean.
- ▶ **Pectin:** A complex carbohydrate extracted from apple pulp and citrus rinds. Used in jams and jellies.
- ▶ **Tragacanth/Shiraz Gum:** Gathered from the dried sap of several species of Middle Eastern legumes of the genus *Astragalus*. Processing is similar to the one used for Gum Arabic, above.
- ▶ **Xanthan Gum:** Similar to Gellan Gum as it is produced by microbial fermentation but uses the bacterium *Xanthomonas campestris*. ☆



6 Y.D. 1:37.

7 This does not contradict the rule, *ein m'vatlin issur lechatchila*, as it is a dilution of permitted foods.

8 Y.D. 116:2.

9 See *Magen Avrohom* O.C. 173:1, *Teshuvos Chasam Sofer* 1:101.

10 See *Pische Teshuvah*, Y.D. 116:3.

11 see *Pische Teshuva*, *Tshuvos Sride Eish* 2:67, re: cooking beef in fish oil.



# Kashrus With a Lot of Gall: The Nut That Isn't



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STAR-K KASHRUS ADMINISTRATOR  
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Every year at the STAR-K Chanuka *mesiba*, Rav Moshe Heinemann *shlit"u*, STAR-K's Rabbinic Administrator, rises to address the assembled. His annual message consists of a brief Chanuka *dvar Torah*, expressions of *hakaras hatov* to the entire staff, and a reiteration of the uncompromising principles of *emes* and *shalom* by which STAR-K is governed.

This year, he added the following to his *divrei chizuk*: "Good kashrus requires a clear understanding of products, process and all the source materials that go into a certified product. What are they?

"Take nuts, for example. Hazelnuts, also known as filberts, are classical tree nuts. The bracha for all nuts grown on a tree is *Borei Pri Ha'eitz*.

"Peanuts, unlike their other shelled counterparts, grow in the ground. The bracha for peanuts is *Borei Pri Ha'adama*.

"Doughnuts," he quipped, "are *Borei Minei Mezonos*. And what bracha do you make on a gallnut? None!"

"What is a gallnut? A gallnut is produced by an oak tree that has become a home to wasp eggs that have been laid on its branches. To protect itself from these unwelcome parasites, the oak tree excretes a liquid that traps the wasp eggs. The excretion hardens into a hardened sphere known as a *gallnut*."

The Rav's mention of gallnuts was both amusing and fascinating. It is worth exploring a bit further the gift and wonder of gallnuts.

## The Gift of Gallnuts: Insects Doing Good

Gallnuts, also known as oak galls, are abnormal outgrowths on plant tissues, often caused by infestations from parasites. The galls are similar in appearance to warts on animals. Galls, so named from the Latin *galla* or "oak apple," can vary in size, shape and color.

In most cases, insect infestation in produce creates serious kashrus issues. Fruits and vegetables that are known to be heavily infested – raspberries and Brussel sprouts for example (though there are others) – may not be eaten at all, since checking such produce and eliminating the pests is virtually impossible. But when certain insects infest trees and other plants, they can create the conditions to allow for the formation of gallnuts.

Gallnuts are not edible but have value as a significant source of tannic acid. Tannic acid accumulates in the galls as a defensive mechanism and has a plethora of uses in both food and non-food applications.

## Tannins: The Hidden Miracle in Gallnuts

Tannins are incredibly versatile. The Gemara mentions *mei afatzim* – gallnut juice – as the base raw material used to manufacture iron gall ink. The "juice," or gallnut extract (gallo-tannin) is the tannic acid extracted from the gallnuts. The tannic acid reacts with iron salts to create a dark, permanent ink and can be used as a bonding agent for dyes. The technical term for this dye fixative is a *mordant*.

Aside from its use as a key component in developing mordants, tannic acid is also used as an insecticide, as well as in the vegetable tanning of leather and the production of red wines. It plays an important role in alcohol production as a colorant. It is the tannin in the oak cask staves that color aging whiskey from clear to amber. Tannic acid is also used to clarify beverages.

The versatility of tannic acid in the food and health industries is quite remarkable. My first tannic acid experience was when Mallinckrodt, a global manufacturer of specialty food additives and pharmaceutical products, requested – at Pepsi Cola's behest – kosher certification for tannic acid to be used as an additive to Pepsi beverages.

Today, the study of tannic acid has led to the development of many new pharmaceutical and biomedical applications. It has multiple uses in medicine and medical research due to its antimicrobial, antioxidant and anti-inflammatory properties. It has also displayed antiviral and antifungal activity and been found to impart anti-inflammatory, antibacterial and anticancer activity to materials.<sup>1</sup> All told, tannic acid is proving to be an increasingly valuable industrial workhorse.

## When in Egypt...

In 1904, Dr. Edward G. Acheson, the inventor of silicon carbide (an abrasive used in grindstone), prepared an interesting treatise on the production of bricks in Mitzrayim and hypothesized what it was about the straw and stubble mixture that made them so durable. He noted that the only known historical reference to the use of organic material added to clay is the use of straw mixed with clay described in the Torah<sup>2</sup> in Sefer

Shmos.<sup>3</sup> According to his hypothesis, the presence of gall atonic acid *in the stubble that was added to the clay* contributed to the clay's elasticity. The extracted tannins in the stubble made all the difference.

He theorized, "This explains why the straw was used and why the children of Israel were successful in substituting stubble for straw, a course that would hardly be possible were the fibre of the straw depended upon as a bond feasible for the clay, but quite reasonable where the extract of the plant was used."<sup>4</sup> Dr. Acheson's fascinating statement furthers our understanding of the remarkable utility of gallnuts and provides us with a new appreciation of events in the Torah.

## A Halachic Irony

The halachic irony of gallnuts is that in most circumstances of insect interaction with its host, it is the *insect* that secretes various liquids on its host. Examples include aphids and cicadas that secrete *honeydew* – a sugary liquid waste – as they feed on plant sap, and lac insects (*Kerria lacca*) that secrete *lac* – a natural resin – used to produce resinous glaze.

But in the case of gallnuts, it is the *tree* that secretes a protective excretion to protect itself from insect predators, which – through the *niflaos Haboreh* – creates the nut that isn't. ☆



Tannin-rich oak casks at the Herzog Winery in California

1 A. Baldwin, B.W. Booth, "Biomedical Applications of Tannic Acid," abstract, *Journal of Biomaterials Applications*, 2022;36(8):1503-1523, <https://journals.sagepub.com/doi/10.1177/08853282211058099>.

2 Edward G. Acheson (1904) "Egyptianized Clay" in *Transactions of the American Ceramic Society*. pp. 31–65, excerpted in Wikipedia article, "Tannic Acid."

3 Shmos 1:14, "... with clay and with bricks"; 5:7, "... let them go and gather stubble for themselves"; 5:11, "... go take for yourselves stubble from wherever you find it."

4 Acheson, loc. cit.





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The Orthodox Union invited STAR-K Rabbinic Administrator **HaRav Moshe Heinemann *shlit”a*** to deliver a *shiur* at the OU Kashrus Conference in Parsippany, NJ, on May 5, 2025. The OU conference was open to all major kashrus agencies and to the OU’s entire network of Rabbinic Coordinators and Rabbinic Field Representatives. Earlier this year, OU CEO **Rabbi Menachem Genack**, who heads the OU’s Kashrus Division, delivered a *shiur* to the STAR-K rabbinic staff.

These reciprocal events demonstrate true *achdus* and mutual respect between both agencies.

Photo Credit: Courtesy of the OU



HaRav Moshe Heinemann speaking at the OU conference



L to R: OU EVP R’ Moshe Hauer, YU Rosh Yeshiva & OU Posek R’ Hershel Schachter, R’ Genack, R’ Heinemann, OU COO R’ Moshe Elefant and STAR-K President Dr. Avrom Pollak

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A non-profit agency representing the kosher in promoting kashrus through education, research and supervision

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This publication is dedicated to the memory of  
**Mr. and Mrs. M. Leo Storch**  
of blessed memory, through a grant from the Storch Family.

### STAR-K SABBATH MODE OVEN NOTICE

The Sabbath Mode feature on ovens does not permit cooking or reheating food on Shabbos.

Download the **STAR-K Guide to Using Ovens on Shabbos** at [star-k.org/ovenguide](http://star-k.org/ovenguide) or scan the QR code at the right.



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