

CHAPTER SEVEN
THE KASHRUT OF GELATIN (1969)

Question: *Is gelatin kosher?*

Answer: Behind this question is a history of violent controversy which has spread beyond the confines of the halls of learning and the cloistered studies of rabbis.

In 1952, *Hapardes*, the well-known halakhic journal, which is considered as virtually the house organ of the Union of Orthodox Rabbis of the United States and Canada, devoted many columns in almost every issue of that year to a discussion of the question.

The controversy was sparked by a *hekhsher* issued by two prominent rabbis, members of the Union of Orthodox Rabbis, for a food product which contained gelatin. Some of the leading lights of the *Agudat ha-Rabbanim* (Union of Orthodox Rabbis) challenged the *hekhsher* and attacked its author as guilty of permitting the consumption of a food product that was patently forbidden, and demanded therefore that the *hekhsher* be revoked. Rabbi Eliezer Silver, who led the battle, issued a responsum in which he marshaled a host of authorities in support of his opposition.

As a result of these sharp protests, the *hekhsher* to the product was revoked. This did not mean that the authors of the *hekhsher* were convinced of their error and yielded to superior learning; I have documentary evidence to the contrary. The authors remained convinced that their *hekhsher* was halakhically valid. In revoking it, they simply yielded to pressure which, mildly speaking, was quite heavy-handed.

After a few years had passed and the air was cleared, food products containing gelatin and bearing a *hekhsher* of members of the *Agudat ha-Rabbanim* appeared again on the market without any of the former verbal pyrotechnics.

This controversy was reflected also in the proceedings of our Law Committee. Before the above-mentioned *hekhsher* appeared, the decision was not to permit any products containing gelatin. In 1952, the question was presented again and yours truly was assigned the task of preparing a responsum on the question (see *Archives of the Law Committee*, 1936-1937, p. 331; 1951, p. 44; 1952, E125; 1953, H153).

Due to personal circumstances, my work was interrupted, and Rabbi Salamon Faber (1911-1998) was requested to pursue the problem. In treating the question, Rabbi Faber sought the advice of the Law Committee on how to define *davar hadash*: should we follow the traditional empiric definition or the scientific concept of the term? The Law Committee did not reach a decision on the point and Rabbi Faber discontinued his research on the question. In 1961, the Chairman of the Law Committee asked me to reconsider the question. Hence, this responsum.

First, we shall try to describe the process of the manufacture of gelatin.

Gelatin is produced from dry bones of animals (kosher and non-kosher) and also from the skins of these animals. The bones are dried, usually for a period of six months to a year. At the end of the drying period, the bones become hard and dry as wood. The bones then undergo a long chemical treatment during which they are treated with hydrochloric acid, salt, lime, and other chemical compounds.

The skins used for the manufacture of gelatin are dried until they become hard and brittle. Then they are treated with chemicals such as hydrochloric acid, salt, lime, etc., as in the case of bones. The skins are freed of all moisture, fat and meat, and their appearance and substance are thus completely changed.

After the bones and the skins have undergone the above chemical treatments, they are placed in large vats of running water, which removes all the impurities caused by the chemical treatment of the skins and bones. The substance is treated again with chemicals, washed again, then transferred to large extractors

where hot water is used to convert the substance into the final product, gelatin.

For a detailed scientific description see: "Gelatin... How It Is Made", in: *Food Engineering*, November 1967, p. 74ff; *This Is Gelatin*, a pamphlet published by Swift & Co.; *Gelatin*, a pamphlet published by the Gelatin Manufacturers' Institute of America in 1962.

It is thus evident that gelatin is the end product of a process in which a substance is treated chemically and transformed into what seems, ostensibly, to be a new substance. To decide whether this end product is kosher, we shall have to answer the following questions:

- a. What is the status of bones? When the carcass of an animal is declared not kosher – of the class of animals declared clean in the Bible but because of a certain blemish or because it has not been slain according to the prescribed law has been declared *treif*, or an animal which died naturally, or of the class of animals declared unclean in the Bible – are its bones included in that declaration? If the bones of the above three categories are purged of any food particles such as the meat attached to the bones, or the marrow within them, or food substances absorbed in them, are these bones considered a food and are they thus included in the *issur* [= prohibition] which applies to the carcass, or do they cease to be a food, become what the Talmud terms a mere piece of wood, and thus are not included in the *issur*?
- b. Should we decide that the bones have the same status as the rest of the carcass and are included in the *issur*, is it possible to change that status by subjecting the bones to a chemical treatment, which transforms the bones so that they become a new product and cease to be a food?
- c. Should we grant that the *issur* is removed from the bones because of the chemical transformation which made them lose the status of food, is this status permanent or may this substance reassume the status of *issur* when by some process it becomes edible again?

- d. When we speak of a product losing its status as food, do we have objective measures which brook no exceptions, or do we take into consideration subjective feelings, as when the producer creates this stage when the substance is not a food as a preparatory step to a stage when it is a food?
- e. Do we differentiate between a case where the end-product is a food eaten by itself, and a case where the end-product is only an ingredient added to another food as a binder or as a coagulant, but is not edible in and of itself?
- f. If we should establish the principle that a chemical or a natural transformation creates a *davar hadash* [=a new thing] and removes the *issur*, do we apply this principle to bones only, or do we follow it to its logical conclusion and apply it also to other substances such as skin and meat?
- g. How do we define the term *davar hadash*?

The authorities who treat this problem all refer back to a responsum of the famous Rabbi Hayyim Ozer Grodzensky (1863-1940) of Vilna who was the recognized halakhic authority of his day. He was asked about

a new product, a powder derived from dry bones which is blended with numerous other foods, and is also used as a binder for a variety of other foods... They took these dry bones, soaked them in acid salts, then they put the bones in water mixed with other substances, passed the bones through phosphorus, boiled them, cleaned them, and dried them. The bones were dried for forty-eight hours. Then they grind them like powdered sugar (*She'eilot u-Teshuvot Ahi'ezer*, Vol. 3, No. 33, par. 5).

His answer was that the product was permissible since dry hard bones are surely not considered as forbidden foods.

We shall bring the sources cited in the above responsum and those most commonly quoted by the other authorities who dealt with the question.

The earliest and most explicit statement is: "And of their flesh we shall not eat' (Leviticus 11:8) – but the bones you may" (*Torat Kohanim, Shemini 4:8*).

The source most quoted is the following statement in the *Shulhan Arukh* of R. Joseph Karo. If a non-kosher piece of meat fell into a vessel containing kosher food, when we apply the principle of *batel beshishim*, the bones attached to the non-kosher meat are counted with the kosher food rather than with the forbidden (cf. *Yoreh De'ah 99:1*). The obvious reason is that the bones are not forbidden.

The Talmudic source for this opinion is the following statement in the Jerusalem Talmud: "The shells of a forbidden food are counted, [not with the forbidden food, but] with the permitted [when an accidental mixture occurs]" (*Yerushalmi Orlah 1:4, fol. 61b*). The Taz (R. David Halevy, 1586-1667) adds: "The bones which are part of a forbidden food are counted with the kosher food: since they are not edible, they are not liable to prohibition" (*Taz to Yoreh Deah 99, subpar. 1*).

Rabbi Abraham Danzig (1748-1820), in his popular and widely accepted code *Hokhmat Adam* (52:1), says this much more explicitly:

Whatever the Torah has forbidden [to eat] applies only to substances which are edible, as it is written: "Ye shall not eat any carrion" (Deut. 14:21). It is so with all forbidden substances. Therefore, bones – whether of carrion or of animals which have become *tereifah* or of any other forbidden things which are hard [i.e., inedible] which do not contain any fluid – are permitted because they are mere bones.

The author elaborates this point further and makes a distinction between soft bones and hard bones. Soft bones are counted as meat and only hard bones are included in this permission. He further maintains that although R. Moshe Isserles disagrees with R. Joseph Karo regarding this law, and we usually follow R. Isserles, in this case R. Karo is right and we follow his ruling when an appreciable financial loss is involved (*hefsed merubeh*). According to these sources, bones are not included in the *issur* of forbidden foods because they are not a food.

Obviously this opinion is far from unanimous. According to many authorities, bones of forbidden foods *are* included in the *issur* of these foods. This is clear from the following statement of Maimonides:

He who eats of carrion, or of *tereifah* or of unclean cattle or beasts, or the hide *or of the bones*, or of the sinews, or of the horns, or of the hoofs, or of the talons of fowls, at the place when if cut blood will spurt, or of their placenta, *even though such eating is forbidden*, the act does not entail a penalty because these substances are not edible, and when eaten with meat so that together they are the size of an olive [the size necessary to constitute a transgression of the law that forbids their consumption] they do not count (*Mishneh Torah*, Laws Concerning Forbidden Foods, 4:18).

In the explicit statement in *Torat Kohanim* quoted above, which excludes bones from the *issur* implied in the verse "And from their flesh ye shall not eat", the exclusion is interpreted to refer to the penalty of lashes (*malkot*) which is entailed by the transgression of a negative commandment.

As to the statement of R. Joseph Karo that when the bones of non-kosher meat accidentally drop into a pot of kosher meat they are counted with the kosher meat when we apply the principle of *batel beshishim*, these opponents explain it thus: The reason is not that the bones have no *issur* upon them but rather that the bones are devoid of any food with the power of *pelitah* [= emission of flavor]. The principle of *batel beshishim* means that the flavor (*ta'am*) of the *issur*, when it has to spread through a volume sixty times its own, loses its identity and has no power to cause another substance to become forbidden. Since the bones do not have their own *ta'am* to spread, they become additional space or volume through which the *issur* has to spread. If, with the bones, there is a volume sixty times the size of the forbidden food, it is a pragmatic fact that it is *batel beshishim*. That, however, does not imply at all that the bones are permitted to be eaten (*Kol Torah* 12/7 [Nissan 5718], p. 15).

The protagonists who are of the opinion that using bones is permissible, parry these strictures as follows: Maimonides' state-

ment must be construed to refer only to soft bones which are edible and not to hard bones which have been purged of all food content.

The claim that the exclusion of bones from the *issur* implied in the biblical commandment "And of their flesh ye shall not eat" (Leviticus 11:8) refers only to the penalty of lashes is not acceptable. The penalty does not apply in this case for another reason. There is a principle that when forbidden foods are used *shelo kederekh akhilatan*, not as normally eaten, there is no penalty of lashes. Eating bones is in that category. Hence, the exclusion must refer to the total *issur*, which includes eating (*Kol Torah* 12/9 [Sivan 5718], p. 9).

This is not the only source that we depend on. We are told that bones are not in the category of food in another context. The following is an example:

He who eats of the carrion of fowl which is clean, from the cluster of eggs in it, from the bones, from the sinews, from flesh that has been detached from a living animal, is ritually pure (*Beitzah* 7a).

Here it is clear that the bones are not a food and are not in the same category as the flesh of the animal. Of course, there is the ready objection on the principle that *issur mitum'ah lo gamrinan*, we do not apply principles maintained in the case of *tum'ah* to an *issur* (see *Yevamot* 103b). The *Noda Beyehudah* explains that in this case it is not a derivation (*yalfuta*), but rather a definition (*gilui milta*). We find in the case of *tum'ah* that the term *akhilah* does not apply to bones. Therefore, in all cases where the term *akhilah* is used, it does not apply to bones.

It would thus appear that if we should maintain that bones, any bones, are not forbidden, then products that are made or derived from bones are not forbidden. Hence, gelatin made from bones is kosher.

We would like to pursue the matter further and find out whether it is not possible that gelatin made from bones is kosher even according to the opinion that bones *are* included in the *issur* of forbidden foods. Since, to produce gelatin, the bones have to go through several chemical transformations so that the end product is

a *davar hadash*, there is reason to believe that the original *issur* has been eliminated.

On this question, too, we have an explicit statement by the great halakhic authority, Rabbi Hayyim Ozer Grodzensky:

So it seems to me to rule in the case of chemical actions which break down a compound and extract from it another substance, like the juice of the stomach called pepsin. And although it would certainly appear that in any substance forbidden by the Torah, all that is latent in it is also forbidden and is considered part of it, nevertheless, since it is impossible to extract the latent substance except by drying the forbidden substance and causing its taste to deteriorate, we consider it as a substance whose taste has been marred (*notein ta'am lifgam*). Even if it is possible to improve the flavor by chemical means and by adding other substances, even so, it is as if *panim hadashot ba'u l'khan* [=a new substance came here] and it is [therefore] like the case of *mosek* [=musk] as interpreted by Rabbeinu Nissim, where the substance is deteriorated at the very outset (*Ahi-ezer*, Part 2, No. 11, par. 5).

Rabbi Grodzensky refers to *mosek* and the interpretation of Rabbeinu Nissim. He also speaks of *panim hadashot ba'u l'khan*, a new substance has appeared. These deserve elucidation because they both touch upon what is fundamental in this question. The *mosek* is referred to as follows:

Rav Hisda said in the name of Zeira: For all incense, before smelling them one must pronounce the blessing "who creates spice trees," except in the case of *mosek*, which is an animal species, where one pronounces the blessing "who creates species of spices" (*Berakhot* 43a).

What is this *mosek* that the Talmud calls an animal species? Rabbeinu Asher says:

Some say that *mosek* is the sweat [secretion] of an animal. More proper to say is that a certain animal has a projection [swelling] on its neck. In this swelling a bloodlike substance

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gathers which subsequently becomes *mosek* (Rosh, *Berakhot*, Chapter 6, par. 34).

Evidently, *mosek* is a product extracted from an animal. The dictionary of Ibn Shoshan defines it as follows:

Mosek: (1) An animal of the mammal species, chews the cud, without horns; habitat, the mountains of Central Asia. Its size is that of a hart; the male is distinguished by its upper incisors. They project from the mouth like two long curving dagger blades (*moschus*); (2) A soft reddish-brown substance with a pungent odor and bitter taste. It is secreted by the male *mosek* by special projections and gathered in a sac near the sex organs. This is used in the manufacture of spices and medical needs. The spice of *mosek* is also mentioned in the Talmud.

Early authorities differ about the permissibility of the use of *mosek*. Rabbeinu Asher quotes the opinion of Rabbi Zerahiah Halevy (12th century), who maintains that it is forbidden to eat *mosek* because we suspect that it has blood in it. Then he offers the amazing opinion of Rabbeinu Yonah who said:

It is possible to give a reason and explain this permission by claiming that the substance is mere waste matter. Though at the beginning it was blood, we take into account its present state. Just as in the case of honey, if a piece of forbidden food fell into it, though the piece melted within the honey [i.e., it was not removed] we consider it as a part of the honey and therefore permissible inasmuch as it is the nature of honey to assimilate to itself substances which fall into it. Here too, though the substance was blood originally, we follow its present state, because it has ceased to be blood; and this is true even if the flavor that it would impart improves the food in which it is used (Rosh, *ibid.*).

That this opinion is amazing is evidenced by the comment with which Rabbeinu Asher concludes this opinion of Rabbeinu Yonah: "It appears that his proof is in need of proof".

Nevertheless, we find here a definite opinion about a situation under which a forbidden food changes its status from a forbidden

substance to one permissible, in this case, when the substance which was forbidden because it contained blood has deteriorated so that it is mere waste matter, *pirsha be'alma*.

Before proceeding further, we must clarify a number of terms used by the quoted authorities. These terms have sometimes been used indiscriminately and therefore caused confusion. We shall try to distinguish between:

1. The term *nityabesh ha-issur* refers to a forbidden food which has become dry or rather completely dehydrated and is then compared to *eitz b'alma*, a mere piece of wood, i.e., not a food.
2. A substance deteriorates so that it becomes unfit for normal consumption, for which the rabbinic term is *pirsha be'alma*.
3. The term *issur pagum* describes a food to which a flavor has been imparted by a proscribed food that spoils rather than improves the whole.
4. The term *panim hadashot* refers to a substance which was so processed that it is transformed and changed into something completely new.

Let us explain these and discuss how they affect our question:

1. According to the *Shulhan Arukh*, when a food becomes dehydrated to such a degree that it can be compared to *eitz be'alma*, an ordinary piece of wood, it loses its status as a forbidden food. Thus, the law is:

Stomach skin is sometimes salted, then dried and it becomes like wood; then it is filled with milk. This is permissible – since it has become dry, it is like a mere piece of wood and there is no meat fluid in it (*Yoreh De'ah* 87:10 in Rema).

On this, the Shakh comments:

The same principle applies to the other intestines, when they are dried until they become like wood. Nevertheless, it appears that one should not do so before the fact (*l'khathilah*) (*ibid.*, 87: 33).

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This principle is applied not only in the laws of *kashrut*. Thus, the *Shulhan Arukh* states:

There are some who say that the essence of wine which congeals on the walls of a barrel or of jars, the custom is to permit it; because one may use the vessel of Gentiles after a period of twelve months (during which it was not used), or after filling and emptying it (with water) and the essence congealed on it is not peeled off because, since it became so dry, all the wine moisture in it has gone and it is now like ordinary dust (*Yoreh De'ah* 123:16).

The same law is applied to blood which has dried completely. Thus the widely accepted book of responsa, *Shevut Ya'akov*, contains the following question (Part 2, No. 70): "On what did the people rely when they established the custom to permit the eating and drinking of the blood of a which has congealed and dried, a substance called *bucksblut*?" And the answer, "It appears to me that the reason is that since it has become so dry that it has become like a piece of wood with no moisture left in it, there is no prohibition against it".

In the case of *hametz* on Passover, we also make a distinction between *hametz noksheh*, which has become hard, and *hametz* which has deteriorated to such a degree that it has become unfit even for consumption by a dog. Thus we read:

Hametz which has become mouldy... and unfit even for a dog's consumption, or if it has been burnt in fire before the time [for removing *hametz*] and it became so scorched that it is not fit for a dog, ... although it is permitted to keep it during Passover, it is forbidden to eat it. [This is true although it cannot be considered a food, but inasmuch as one wishes to eat it, it has been raised to that status by his intentions and, according to rabbinic enactment, it became a food because of his intentions to eat it and is forbidden] (based on *Arukh Hashulhan, Orah Hayyim*, 442:30).

While this form of *hametz* is not permitted, we see that the drying process has reduced or changed its status. Here, however, we see a new element which has entered the discussion, that of thought and

intention. It is possible that a substance which is not edible is considered so, if a person, by his action, reveals that he considers it a food. In the subject under consideration, this is vital because the entire process of dehydration is with the intent and purpose of preparing it to become a food eventually. Furthermore, in the modern food industry, dehydrated foods are very common, and are considered a food even in their dehydrated form because people know that with some addition of liquid these will become edible.

2. When a substance deteriorates to such a degree that it cannot be considered any longer in the category of food but rather as ordinary waste matter (*pirsha be-alma*), it is not forbidden for consumption. The fact that waste matter, even of an animal unfit for food, is permitted according to dietary laws, is stated explicitly in the Talmud. Thus we find in the Torah: "The ox shall surely be stoned and his flesh shall not be eaten" (Exodus 21:28); and the Talmud explains: "its flesh is forbidden but its dung is permitted" (*Avodah Zarah* 34b). Even more explicit is the following Talmudic statement:

The final decision is that in the making of cheese one may not use as a binder the skin [=the wall] of the stomach of a *neveilah* [=an animal of a clean species that died without proper ritual slaughter], but one may use the stomach [the contents of it] of a *neveilah* or of an animal slaughtered by an idol worshipper, and of a kosher animal which sucked from a *tereifah* animal [the milk in its stomach thus coming from a forbidden source], and how much the more so the stomach of an animal which sucked from a kosher animal. Why? Because the milk gathered in it is ordinary waste matter (*Hullin* 116b following the reading of *Tosafot*).

This is the basis for the decision of Maimonides:

The stomach of a *neveilah* and the stomach of an unclean animal are permissible because they are like the rest of the waste matter in the body. It is therefore permitted to use the stomach of an animal slaughtered by an idol worshipper and of an unclean cattle or beast, as a binder in the making of cheese (*Mishneh Torah*, Laws Concerning Forbidden Foods, 4:19).

Similarly, the Talmud says:

Rav Huna said, the skin which comes from opposite the hind face of an ass [according to Rashi, it refers to the placenta, the afterbirth] is permissible. Why? Because it is ordinary waste matter (*Bekhorot* 7b).

Based on this, Maimonides is even more explicit and says: "The afterbirth of an ass may be eaten because it is like waste matter and urine which are permitted" (*Mishneh Torah*, Laws Concerning Forbidden Foods, 4:20).

Objections are raised that the cases we cited are not similar to the one under consideration. In the one case, we have a substance which always had the status of waste, and we stated that it was never included in the category of forbidden food. In the case of the milk in the stomach, when the concern is that of mixing of meat and milk, the objection is that the milk in itself is not a forbidden food. It is only when it comes in contact with meat that it has the effect of a forbidden food, and by that time it had already deteriorated so that it was mere waste matter. (See *Noda be'Yehudah*, *Yoreh De'ah*, No. 26). Our question is about food which originally was normal but then deteriorated to such a degree that it can be considered waste matter. Does it by this process lose its status as a forbidden food?

We have good evidence that the *poskim* did not make such a distinction. The Talmud and Maimonides, when they permit the use of the milk in the stomach as a coagulant, include the milk of unclean animals which is in the stomach of either clean or unclean animals. This means that a substance which once had the status of forbidden food (*issur*) now assumes the status of permitted food (*heter*). In the case of *mosek*, which we brought up earlier, one of the reasons R. Yonah gives for permitting its use, is that it is ordinary waste matter. This is explicitly the case of an *issur* becoming a *heter*.

On this basis, the *Tiferet Yisrael* permits the consumption of what he calls Wallachian cheese:

It seems to me that our Wallachian cheese, in which a substance called *lab*, i.e., the milk in the stomach of calves, is used as a binder, may be eaten though the *lab* was already in

the stomach of the calf for many days. At all events, the milk itself that is used for the making of the cheese is sixty times as much as the *lab*. Should you object that a substance used as a binder never loses its identity, we can assume that the *lab* is congealed and is thus ordinary waste matter (*Avodah Zarah* 2:5 in *Boaz*, note 2).

3. A substance which when mixed with another substance impairs its taste rather than improves it, is called *notein ta'am lifgam*. If the substance having this effect is a forbidden substance, it does not cause the other to become forbidden. The substance may by itself be edible and good, but when mixed with another food may spoil its taste, and it may be that the substance itself has become putrid and tastes so bad that it is not fit for human consumption (*Yoreh De'ah* 103:1-3).

4. The term *panim hadashot* used by Rabbi Hayyim Ozer Grodzensky reflects an important principle: when a substance goes through a transformation which changes it into something completely new, it also loses its former status in regard to being a forbidden food.

The ancients had no conception of what we, today, call chemical changes. Obviously, they empirically observed objects changing and becoming something else. The most common visible process of such a change is the effect of fire on a substance. The resulting ashes are obviously a new and different substance. Hence they ruled that the ashes of all those things in the Temple, which required burning because they could not be used, could be used, since the ashes were a new substance (*Temurah* 34a).

Another form of observable change was when a substance changed its form because it was treated by another substance. The following examples imply or exemplify such a change.

We learn in the Mishnah: "Rabbi Hanina ben Antigonus said: A kosher animal which sucked from a *tereifah* animal is disqualified from being brought upon the altar" (*Mishnah Temurah* 6:5). The Talmud explains it as follows:

What is the reason? Is it because it is fattened by it? In that case, if he fed the animal with kernels dedicated to an idol, it

should be forbidden. To this Rabbi Hanina Trita'ah read before Rabbi Yohanan, it is a case where he made the animal such hot milk every morning so that the animal could subsist on it a whole day [24 hours] (*Temurah* 31a).

Rabbi Ovadiah of Bartinoro (ca. 1450-1510) explains the *Mishnah* as follows (*ad loc.*):

A kosher animal which sucked from a *tereifah* animal is disqualified on the day that it sucked, i.e., for twenty-four hours. It is disqualified for a sacrifice because it can subsist on this milk without any other food, and the milk does not become digested in its intestines until a full day has been completed. After it has become digested in its intestines, however, Rabbi Hanina agrees that the animal is kosher, since everyone agrees that even an animal which has been fattened on vetches dedicated to an idol is fit for the altar.

Thus, when the digestive juices work on a substance, they create a *davar hadash*. Another example is this: "If an unclean fish swallowed a clean fish (and it was recovered intact) it is permitted to eat it, since it was not bred from the other" (*Bekhorot* 7b). As is obvious, this law applies before the process of digestion takes place. After the process of digestion, the host assimilates the foreign body and the foreign substance assumes the status of the host.

Rabbi Moshe Feinstein treats an analogous question. Are the milk and meat of cattle which are fed *hametz* exclusively, even during Passover, permissible for use on Pesah? He maintains that they are permissible, but he makes the following comment:

If we could make a machine that would operate like a digestive system, it is inconceivable if the substance was originally forbidden (*issur*) that it should become permitted as a result of the digestive action (*Igrot Moshe, Orah Hayyim*, Vol. 1, No. 147).

He, therefore, makes a distinction between a natural and a mechanical process.

We would like to reverse the reasoning. Inasmuch as we accept that a forbidden food which has been consumed and digested by a

kosher animal becomes part of the animal and, as such, loses its forbidden status and becomes kosher through the host, if this process were reproduced by a machine, the end product should also be permitted. The distinction between a natural and mechanical process has no halakhic support. (See the above-quoted opinion of Rabbeinu Yonah about the nature of honey to assimilate to itself foreign bodies that fall into it).

It is neither difficult nor incorrect to extend this to chemical changes, which the above-mentioned really were. A substance treated by another substance which transforms it chemically, thus becomes a *panim hadashot*. Indeed, Professor David Zvi Hoffman says in a similar case:

And consider "Zametoze" which has come into being by way of chemical processes, has gone through a great change so that a "new substance" has come here. My son Michael (may he live long) who is a doctor told me that the meat has changed in a way similar to the change taking place in the stomach by means of digestion (*Melamed l'Ho'il*, Part 2, No. 27).

R. Yehezkel Abramsky quoted in *Responsa Tzitz Eliezer*, Vol. 4 in the introduction, follows the scientific principle and on that basis claims that it is not a *panim hadashot*. He claims that the substance is abstracted, not transformed. This is not correct scientifically and, halakhically, it goes counter to the claim of R. Hayyim Ozer, who said:

Nevertheless, since it is impossible to bring out this potential except through the substance being dried, and its forbidden taste being marred, it is subject to the rules of marred foods (*Ahi'ezer*, Part 2, No. 11, par. 5).

We may return to answer the questions we posed at the beginning of our responsum.

The first question we asked was about the status of bones of non-kosher animals, bones that have been purged of all flesh and marrow and dried thoroughly. We have presented sufficient evidence that such bones are not forbidden for consumption. Most of the gelatin used for the manufacturing of Jello is made of such

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bones. Those most scrupulous can always inquire of the manufacturers whether their product is made from bones. They usually answer such questions gladly. If the gelatin is made of bone, it is *kasher lamehadrin min hamehadrin*.

However, our main support for a *heter* comes from the fact that, in the manufacture of gelatin, the materials used go through chemical changes which make the end product a new product. Both by pragmatic observation and by chemical analysis the end product is something quite different from the original substance.

There are those who claim, as Dayan Abramsky does, that the collagen from which gelatin is made is not a new substance. All that the chemical treatment does is remove the elements not necessary for the gelatin, such as calcium and other impurities, leaving intact an element that was there all the time and thus not creating a new one. There is no question that there is a chemical change in the collagen itself (*Food Engineering*, November 1967, p. 75). Even, however, if we should not consider this enough of a change chemically to make it a *davar hadash*, there is enough of a change there from the pragmatic aspect to put it in that category. Furthermore, as Dayan Abramsky says, there are enough other factors in the process to lead us to make it permissible, such as the fact that there is a strong opinion that bones themselves are not forbidden. Furthermore, there is the opinion of R. Hayyim Ozer, that when an object is treated with powerful chemicals in order to remove part of it, it becomes permissible because of the principle of *noten ta'am lifgam* (*Ahi'ezer*, *ibid.*).

In a recent decision of the *Bet Din* of London, the same principle was applied to gelatin made from skins (Rabbi Aryeh Leib Grossnass, office of the *Bet Din*, London) It is when we come to gelatin made from other substances, such as meat and fat, that we meet with the greatest difficulty. There is the persistent insistence on the principle that once a thing has the status of an *issur*, it remains so, no matter what happens.

Psychologically, and logically too, there is a resistance to allow something forbidden to be transformed into something permissible. Now, with the new science of food processing where such a

transformation often takes place, a new area of *heterim* will open and as Dayan Abramsky cautions, people will say that it is a matter of caprice with the rabbis whether a thing is permitted or not. I did not need Dayan Abramsky's warning. I heard well-meaning lay people say in such cases that the rabbis can twist and turn such decisions to suit their fancy. And yet a sense of responsibility gives us no choice but to follow the halakhic conclusion. Furthermore, the fear for the *Hilul Hashem* that many *hekhshirim* entail tempts us to remove as many articles from need of a *hekhsher* as is possible to lessen the area of such *Hilul Hashem*, *vedai lahakima* [= the wise will get the hint].

To sum up: Gelatin made from bones or hides is kosher. Though this opinion is not unanimous, there are an increasing number of authorities who consider the product permissible. In the case of gelatin made from the flesh of non-kosher animals, there is a strong objection because of the principle of *kol hayotzeh min ha-issur assur*.

To strengthen my case, I would like to add the opinion of the following authorities who maintain that when a substance is completely dry (dehydrated), it loses its status of *davar ha-assur*. The *Shulhan Arukh*, after saying, "a substance as dry as wood is forbidden", adds that some permit even meat which becomes dry as wood, with the additional remark that even if thereafter the substance is cooked or soaked and as a result ceases to be as dry as a piece of wood, it retains its permitted status (*Arukh ha-Shulhan*, *Yoreh De'ah*, 87:43). The same opinion is voiced in *She-eilot u-Teshuvot Tiferet Zvi*, quoted in *Pit'hei Teshuvah*, *Yoreh De'ah* 87, subpar. 20.

It is therefore recommended that we allow the use of all gelatins.

FOR FURTHER READING

- Golinkin, R. David, ed. *The Responsa of Professor Louis Ginzberg*, New York and Jerusalem, 1996, pp. 151-154
- Sheinkopf, R. David I., *Issues in Jewish Dietary Laws*, Hoboken, New Jersey, 1988, pp. 1-119
- Yosef, R. Ovadiah, *Torah Shebe'al Peh* 34 (5753), pp. 17-29