

הלכה ברורה

Halacha Berurah

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The Search for Techeiles

EMAIL
EDITION

Reviewed by
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In recent times there have been several attempts to discover and revitalize this most precious *mitzvah*. None, however, has been met with universal acceptance. It is our intention in this article to provide a number of the criteria mentioned by *Chazal* in the identification of the *chilazon*, discuss tests that *Chazal* used to determine the authenticity of the *techeiles* dye, present a historical overview of the disappearance of *techeiles* and the

attempts to rediscover it, and analyze the different suggestions that have been offered over the years.

When Did the Identity of the *Chilazon* Become Unknown?

It is unclear exactly when the identity of the *chilazon* and the manner of producing *techeiles* became unknown. *Techeiles* was definitely available after the destruction of the second *Bais Hamikdosh* (70 C.E.) as there are references in the *Gemara* of *Amoraim* having it.

The latest reference to the possession of *techeiles* in the *Gemara* is a reference to Rav Achai having it.⁸ Rav Achai was one of the heads of the *Rabbonon Savorai*, the post-amoraic *chachomim* who were the final editors of the *Gemara*. The *Gemara* was completed in the year 475 C.E. Rav Achai, who was *niftar* around the year 510 C.E., is quoted very often in the *Gemara* in an explanatory context.⁹

The *Medrash Tanchuma*, which was completed around 750 C.E., states that

The Mitzvah of *Techeiles*

The *Torah* states in *Parshas Shelach*: ועשו להם ציצת על כנפי בגדיהם לדרתם ונתנו על ציצית הכנף פתיל תכלת—*They are to make themselves tzitzis on the corners of their garments throughout the generations, and they are to place upon the tzitzis of each corner a thread of techeiles.*¹

The *Gemara* explains this *posuk* to mean that the *tzitzis* on a garment should consist of white thread and *techeiles* thread. *Techeiles* is wool that has been dyed with blue dye produced from the 'blood' of a sea creature known as the *chilazon*.²

On each of the four corners of the garment, four *tzitzis* threads are inserted into a hole and the threads are folded over, thereby making eight strings. There is a *machlokes Rishonim* as to how many of these eight strings should be dyed. The *Rambam* maintains one, the *Ravaad* two, and *Rashi* and *Tosafos* four.³

Chazal state that the color of *techeiles* is similar to the color of the sea, the color of

the sea is similar to the color of the sky, and the color of the sky is similar to the color of the *kisei hakavod*.⁴ The *Torah* states that by performing the *mitzvah* of *tzitzis* one will remember all the *mitzvos* of *Hashem*. The *Ramban* explains that the reminder is provided by the color of the *techeilis* which is ultimately similar to the *kisei hakavod*.⁵

For many centuries, the identity of the *chilazon* and the manner in which *techeiles* is produced has been lost. Consequently, *tzitzis* have generally consisted only of white threads which *halacha* recognizes as acceptable in the absence of *techeiles*. The *mitzvah* of *techeiles* according to most opinions is not an independent *mitzvah*, but an aspect of the *mitzvah* of *tzitzis*. Therefore, in its absence, by substituting white threads, one fulfills the *mitzvah* of *tzitzis*, though not in the preferred manner.⁶

It has been said in the name of various *rebbe*s that the discovery of *techeiles* is one of the stepping stones for the coming of *Moshiach*, as the *techeiles* dye will be used to color the *bigdei kehuna*.⁷

Please Note: Due to the intricacy of the material discussed in each issue, and the brevity of its treatment, a *Rov* should be consulted for a final *psak halacha*. In addition, this publication does not intend to be מכריע on issues that are a *machlokes haposkim*. Although we have usually brought the dissenting views in the footnotes, we have selected for simplicity sake to incorporate into the main text the views of the *Mishnah Berurah*, R' Moshe Feinstein, R' Shlomo Zalmen Auerbach and several other preeminent *poskim*. Please send all questions and comments to 1341 E. 23rd Street, Brooklyn, NY 11210 or email to hbinfo@thekosher.net

nowadays all we have are white threads because the source of *techeiles* has been concealed.¹⁰ The *Ramban* postulates that *techeiles* became lost due to governmental decrees that prohibited commoners from possessing it as it was marked a royal color.¹¹ Others claim that it was a result of the persecution of the Jews under the Byzantine Empire and the Moslems during the seventh century. The Jews were forced to wander from place to place, and in the interim, the tradition of the *chilazon* and the way it is processed became lost.¹² Some speculate that during the following few centuries there were select individuals - including the *Rambam*, perhaps - who had *techeiles*.¹³

Historical Overview of Rediscovery Attempts¹⁴

The Radziner Rebbe, Rav Gershon Henoch Leiner, was well-known for his revolutionary masterpiece *Sefer Sidrei Taharos*, which gathers *divrei Chazal* from all over *Torah* and places them with the appropriate *mishnayos* of *Seder Taharos*, thus forming somewhat of a *Gemara* on these *masechtos* on which we do not have any written *Gemara*. The *sefer* received the approbation of the leading *gedolim* of the nineteenth century, who all recognized the sheer brilliance involved in the writing of such a work. In addition to his proficiency in *Torah*, the Radziner Rebbe was also very fluent in secular studies including medicine, chemistry and engineering.

In 1887, the Radziner Rebbe got the intuition to place all his efforts into rediscovering *techeiles* and revitalizing this long-lost *mitzvah*. He published a *sefer* that year discussing all the references in *Chazal* that allude to the *chilazon* and the *techeiles* dye that is produced from it.

In the *sefer*, the Radziner Rebbe pieced together these references to develop all the possible indications as to how the marine creature called the *chilazon* is supposed to appear. He also spent much effort clarifying whether it is possible to reinstate the *techeiles* nowadays, and indeed concluded that the source was forgotten only due to the political events of past generations and not because it was concealed and taken away from us until *Moshiach* comes.

At the end of the *sefer*, the Radziner Rebbe writes that he sent all the information he compiled to marine experts, and although they speculated as to what type of fish the *chilazon* is, they were not successful in con-

verting the dye into the color *Chazal* describe the *techeiles*. He concludes by mentioning his determination to pursue the matter on his own and with *Hashem's* help reinstate this *mitzvah*. He sent the *sefer* to many *gedolei Yisroel* of that generation.

In 1888, the Radziner Rebbe traveled to Italy and spent the greater part of that year at the world-famous aquarium in Naples, studying all the different types of marine creatures housed there in surroundings resembling their natural habitats. He concluded that the cuttlefish (*Sepia Officinalis*), a squid like creature, also known as the tint fish, which exudes a black ink when in danger, fits the description of the *chilazon* as indicated by *Chazal*, albeit with some slight modifications.

The Radziner Rebbe returned to Poland with a significant amount of blood from the cuttlefish and was determined to devise a method to convert it to the color blue. In fact, he was very pleased to discover that the blood was black, since the *Rambam* describes the *chilazon* as possessing black blood. This obviously comes across as puzzling in light of the fact that *Chazal* indicate the color of the *chilazon's* blood as being blue. The Radziner Rebbe explained that the *Gemara* mentions that *techeiles* is produced by heating up the blood with the addition of a few herbs. He reasoned that the natural blood is probably black as the *Rambam* puts it. Only after it is heated up with some other chemicals does its color change to blue.

After consulting with many chemists and using natural compounds that were available in the times of *Chazal*, the Radziner Rebbe successfully converted the blood to a bluish color. Pleased with his findings, he published another *sefer* clarifying the issue and publicizing that he had discovered *techeiles*.

In 1889, the Radziner Rebbe began mass-producing the *techeiles*, following the opinion of the *Rambam* and dyeing only one of the eight strings on each corner of the *bege*. All of his *chassidim*, as well as many others, began wearing the *techeiles*, with close to fifteen-thousand people wearing it on their *tzitzis*. This included many *Breslover chassidim* who also started wearing it, but accepted the *Raavad's* view which requires two strings to be dyed. The *Breslover chassidim* had a *kabbalah* from Rav Nachman of Breslov that the year 1888 was marked for the *geulah*. Since nothing happened in the

year 1888, they interpreted it to refer to the discovery of the *techeiles*, which, as mentioned, is one of the signs of the *geulah*.

Although thousands of people began wearing the newly discovered *techeiles*, the Radziner Rebbe had expected many more people to do so. He was very taken aback that most of the *gedolim* of his time did not offer any comment on the matter, not in support of his discovery nor in opposition to it. He questioned the silence of these other *gedolim*, and said that those who agree with his findings should support him and those who disagree should notify him of their opinion as well. If he was in error, he said, he was willing to retract his stance.

There were actually a few *gedolim* who did write to the Radziner Rebbe explaining why they did not advocate wearing the *techeiles* he had discovered. The Radziner Rebbe published many letters clarifying and defending his position, but was taken from this world shortly thereafter, at a relatively young age, and a collection of these letters was first published posthumously in 1891. It is said that the *Maharsham*, amongst some other *gedolim*, privately put on a *tallis* that had the Radziner Rebbe's *techeiles* and requested to be buried with it.

During the years of World War II, the Radziner Rebbe's exact method of producing the blue dye was seemingly lost. It was later discovered that Rav Yitzchok Isaac Herzog, the former chief rabbi of Israel, had in his possession a letter outlining the exact details as to how the Radziner Rebbe's *techeiles* dye was produced. At that time, Rav Yitzchok Isaac Herzog was working on writing a thesis about *techeiles* for his doctorate and exposed the letter. He rejected the Radziner Rebbe's *techeiles* for reasons which we will discuss below, and postulated that the *chilazon* is a snail called the *Janthina*.

In recent years, there has been a renewed interest in determining the true identity of the *chilazon* and *techeiles*. Rav Herzog's *techeiles*, which had never really been accepted, was officially rejected. Some postulated that the *chilazon* is a different snail called the *Murex Trunculus*. Although many people began wearing *techeiles* made from the *Murex Trunculus*, it was far from universally accepted and was openly rejected by many reputable *talmidei chachomim*.

Prior to analyzing each of these particular opinions and suggestions, it is imperative to be familiar with some of the basic

aspects of the *mitzvah* mentioned by *Chazal* and in the *poskim*.

Substituting the *Chilazon* Dye

One of the first questions that must be analyzed is whether there is a need to locate the *chilazon* and remove its blood to make it into dye or if any dye suffices, provided that it is of the same shade of blue.

During the times of *Chazal*, *techeiles* was quite expensive due to the *chilazon's* rare appearance, as will be explained below. There were many counterfeiters who would color *tzitzis* with a dye extracted from an indigo plant which looked similar to the color of *techeiles* and would falsely market it as such.

Aware of this problem, *Chazal* devised chemical tests to differentiate between the genuine *techeiles* and the forged one. One test determined whether certain specific chemicals were able to make the color fade. The other test determined whether subjecting it to a certain procedure would improve its color or not. If the color faded from the first test and did not improve from the second test, it was clear that it was dyed with the indigo plant and not with genuine *techeiles*.¹⁵

The *Tiferes Yisroel* postulated a very novel approach. He maintained that *techeiles* does not have to come from the *chilazon*, and as long as a dye possesses these qualities, it is kosher even if it originates from plants. Virtually all *poskim* disagreed with this suggestion.¹⁶

Though the *Radziner Rebbe* disagreed with the *Tiferes Yisroel's* approach on a practical level, he agreed with it on a theoretical level. He maintained that no plant dye would be able to blend in and retain its color as steadfastly as animal dye. In order for the dye to be completely absorbed and retain its color in the wool which comes from an animal, it, too, has to originate from an animal. He offered a detailed scientific rationale for this, and thus maintained that if there are indeed marine creatures other than the *chilazon* from which one can produce a dye that possesses these qualities, the dye can be used for *techeiles*. He writes that in order to be certain that it possesses these qualities, the plant or animal dye would have to pass the exact tests used by *Chazal*. Alternatively, if one does find a marine creature that has the physical features *Chazal* use to describe the

chilazon, one may assume that it is indeed the *chilazon* and the dye does meet these qualifications.¹⁷

At present time, no one is familiar with the exact procedures *Chazal* used in conducting their tests. Tests which were thought to be on target have been questioned based on the fact that the indigo plant passed as well, which clearly disproves the functionality of the test as we know it. Consequently, it is imperative to be familiar with the criteria for the *chilazon* in addition to the chemical properties of the dye.

Physical Features of the *Chilazon*

There is a *Gemara* in *Maseches Menachos*, which, although written in a seemingly cryptic manner, sheds some light on the actual physical appearance of the *chilazon*. It states that: 1. The coloration of its body is similar to that of the sea. 2. Its anatomy is similar to that of a fish. 3. It emerges once in seventy years. The *Gemara* then states that one dyes *techeiles* from its 'blood'. The *Gemara* further mentions that since the *chilazon* is so rare, the cost of *techeiles* is so exorbitant.¹⁸

Anatomy

The *Medrash* implies that the *chilazon* has a shell that grows with it,¹⁹ which could mean that the *chilazon* is a type of snail. This fits well with the understanding of *Rashi* who generally refers to the *chilazon* as being similar to a fish - implying that the *chilazon* is a marine creature - although, in one place, he describes it as a worm.²⁰ A snail fits both descriptions. Alternatively, the *Medrash* could refer to an internal shell. The cuttlefish has an internal cartilage shell. It is similar to a fish in that it is a marine creature which can swim in the ocean.²¹

Location and Frequency

The *Gemara* in *Maseches Shabbos* mentions that there were fishermen whose occupation was hunting the *chilazon* in the Mediterranean sea between Tyre and Haifa (i.e. northern Israel and southern Lebanon - and in ancient times, Phoenicia).

The *Radziner Rebbe* claimed that when the *Gemara* states that the *chilazon* emerges once in seventy years it cannot mean that it is inaccessible except for that time, for how could these fishermen have made a livelihood from doing this? Thus,

he concluded, it seems that *chilazons* were always available in certain waters, albeit with some difficulty. He maintained that once every few decades *chilazons* would swim out of the water on to land, and during those times they were numerous and easily accessible.²²

Blood Type

The *Gemara* in *Maseches Shabbos* states that if one traps a *chilazon* on *Shabbos* and squeezes out its blood, he is only liable for trapping it. *Tosafos* comment that even though one intends to squeeze out the blood, he is not liable for this, because the blood that is extracted from a *chilazon* is not its lifeblood, but rather an inky secretion stored in a cavity within the creature.²³

Additionally, the *Gemara* mentions that even though the *chilazon* will inevitably die in the process, it is not intentional and is not desired, for the longer the *chilazon* is alive, the clearer the dye it secretes becomes. Consequently, one is not liable *Mideoraisa* for the *chilazon* dying, even though it is inevitable, as it is considered a *pesik reisha d'lo nicha leih*.

The Recent Attempts to Identify the *Chilazon*

I. Cuttlefish - *Sepia Officinalis*

The *Radziner Rebbe* maintained that although there are many marine creatures that have inky secretions, the *Sepia Officinalis* subspecies of the cuttlefish species possesses basically all the features he was looking for. Its skin color changes so that it can camouflage itself in its natural surroundings. Thus, it resembles the color of the sea. It possesses an inner shell and has a separate ink sack that contains black ink, which is mentioned by the *Rambam* in his description of the *chilazon*. *Chazal* imply that coming out of the *chilazon's* head is something which appears similar to hook-like threads that are put on chains which can be hung on a wall and that it has or-



The cuttlefish

gans or fringe-like extensions that resemble a snake. The cuttlefish has eight arms and two tentacles protruding from its head which would seem to satisfy this feature.

As mentioned earlier, although thousands of people began wearing the *techeiles* discovered by the Radziner Rebbe, it was not universally accepted. From the several objections put forward, one of the most notable ones was from the *Bais Halevi*, who stated that in order to proclaim a certain species as being the *chilazon*, one has to be certain that the species was unknown for ages and the manner of making the blue dye was not either known. Otherwise, it would be considered as if we have a negative *mesorah* stating that this particular species is not the *chilazon*.²⁴

Additionally, the *Ran* explains the *posuk* referring to *Klal Yisroel* as “*Am k’shei oref* - a stiff-necked nation” to mean that *Klal Yisroel* is very skeptical when it comes to changing its practices based upon new discoveries, and unless something is conclusively proven, *Yidden* will not modify their ways. Once it is proven, however, *Yidden* will act accordingly, accepting the practice at all costs.²⁵

While working on his doctoral thesis on *techeiles*, Rav Yitzchok Isaac Herzog sent the Radziner Rebbe’s *techeiles* to three independent laboratories in three different countries to investigate its chemical breakdown. The results astonished him. All three laboratories came to the same conclusion: it had the identical chemical makeup as a well-known synthetic dye known as Prussian blue.

Rav Herzog began investigating the matter and realized that the Radziner Rebbe had added chemicals into the dye to change its color from black to blue. Although the *Gemara* does mention the insertion of chemicals into *techeiles*, according to *Rashi* the chemicals are added only to function as a processing agent but not to serve as a basis for the coloring of the resultant dye. In this case, however, the chemicals added to the mixture were iron, potash, ammonium, chloride, muratic acid, sulfuric acid, and tartaric acid, which served as the essence of the dye.

Furthermore, even according to *Tosafos* who postulate that the chemicals were in fact part of the dye, Rav Herzog maintained that it seems clear that the *chilazon* blood must be a unique substance which

would be needed to furnish the dye and not merely serve as a supplier of an organic compound which can easily be obtained from an array of organic substances. In the case of the Radziner Rebbe’s *techeiles*, the only ingredient which the chemicals did not supply was an organic compound needed to supply carbon and nitrogen. Any organic compound would suffice. In fact, the original Prussian blue was made by using ox blood. Rav Herzog speculated that the Radziner Rebbe assumed that since the added chemicals had no intrinsic color, the blue dye must have been inherent in the black ink. This, however, was not the case.

It may be possible to produce a blue dye from the cuttlefish in a different manner than the way the Radziner Rebbe produced it with the aid of his chemists; however, no such method has been discovered as of yet.²⁶

There were some other minor objections put forward including the fact that the color in the Radziner Rebbe’s *techeiles* can be washed off with soap. The Radziner Rebbe himself countered this and other minor objections. He brought proofs that the condition that the dye be steadfast is only when it is subject to normal wear and tear, and not when toxics are used remove its color. However, Rav Herzog’s objection remains the most significant one.²⁷

II. *Janthina*

Rav Hertzog concluded his thesis with an open suggestion that perhaps the *chilazon* is the *Janthina* snail, whose shell possesses a violet color. The *Janthina* snail secretes a violet dye, and its species often live in large groups that are attached to one another. On rare occasions, they have been known to wash ashore by the millions. This may be what the *Gemara* refers to when it says that the *chilazon* emerges once in seventy years.

Modern researchers have rejected the suggestion of the *Janthina* snail as the *chilazon*. Amongst their objections is their claim that even though it does secrete a blue liquid, it does not produce a dye that can be used to color cloth, for the fluid turns

brown after a few minutes. Additionally, it is water soluble and its color does not remain steadfast in the cloth.²⁸

III. *Murex Trunculus*

In recent times, an organization in Israel asserted that the *Murex Trunculus* snail is the lost *chilazon*. This organization now markets blue woolen strings to be placed as *techeiles* on *bigadim* of *tzitzis*.²⁹

The belief that the *Murex Trunculus* snail is the *chilazon* stems mostly from the location where it was discovered. We mentioned above that *Chazal* say that there were fishermen who would hunt the *chilazon* between Tyre and Haifa. This was the ancient Phoenician area, which is presently northern Israel and southern Lebanon. It is documented that the center of the dye industry in the ancient world was Phoenicia.

The most famous dye was the Tyrean Purple. This color was used by many noblemen and was quite pricey. There are archeological findings of a vast amount of broken *Murex Trunculus* snail shells near the cities of Sidon and Tyre. Each was broken opposite the hypobranchial gland - the location where

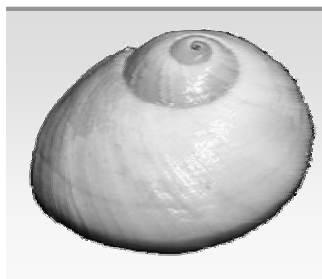
the dye is released from.

Indeed, Rav Herzog contemplated at one point that the *Murex Trunculus* is the *chilazon*. However, he rejected it on several accounts. Firstly, *Chazal* state that the color of the *chilazon*’s body is similar to the sea. The actual body of the *Murex Trunculus*

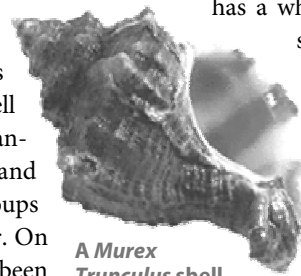
has a whitish color which does not resemble the sea, and its shell is light brown. Additionally, it produces a purple dye, not a blue one.

In an attempt to defend their findings, researchers claim that when *Chazal* stated that the color of the *chilazon*’s body is similar to the sea, they referred to the color of the seabed which is brown. In addition, they claim, even if the *Murex Trunculus* is brown, in its natural habitat its shell takes on a blue-green color due to algae that become attached to it.

These defenses are difficult to comprehend, since the *Gemara* uses the same terminology in defining the color of the *chilazon*’s body and the color of *techeiles*.



Janthina



A *Murex Trunculus* shell

(The *Gemara* states that it is “*domeh liyam*,” similar to the sea.) It is highly unreasonable to say that regarding the color of *techeiles* the *Gemara* refers to the sea, and just a few lines later, regarding the color of the *chilazon*, the *Gemara* refers to the seabed.

Furthermore, the straightforward interpretation of the term “*gufo*” is the creature’s actual body. Even if one were to argue that it can also refer to the shell since this is what first meets a person’s eye, it is unreasonable to extend this untenable idea to also include foreign organisms, such as algae, that become attached to it. *Chazal* would not refer to that as “*gufo*”, but would have been more descriptive, especially if this is the primary *Gemara* in *Shas* that deals with the *chilazon*’s physical features. Moreover, algae would not be distinctive at all, since it also covers everything in that area of the sea as well. This is all in addition to the fact that in most cases, the color of algae is green, not blue.

As far as the color of the *Murex Trunculus* dye is concerned, the color pattern is as follows. The gland exudes a clear liquid, and when affected by oxygen it changes colors. First it changes to yellow, then to green, then to blue, and finally to purple. If it is left for a while, it dries out and turns black. Thus, the suggestion was made that perhaps this can fit well with the *Rambam*’s explanation that the blood of the *chilazon* is black. However, a straightforward reading of the *Rambam* would imply that the natural color of the blood is black and not after it is dried out. The bigger question is the fact that the resulting color must be blue, not purple. In the early 1980s it was discovered that if the purple liquid is exposed to direct sunlight or artificial sunlight, the color of the dye changes from purple to blue.

In order for the color of a dye to remain steadfast on a cloth, the dye has to be water soluble at first to allow it to get fully absorbed. Once absorbed, it must be insoluble so that it won’t get washed off. The liquid that is secreted from the gland of the *Murex Trunculus* is naturally insoluble. In order to make it soluble, it must undergo a process which causes it to be chemically reduced. This is performed by adding chemicals which deoxidizes it (i.e. removes oxygen components from it). The resultant color has a yellowish-green shade. If ex-

posed to direct sunlight in its reduced state, the bromine (purple) molecules become unbound from the blue molecules, and after it is placed on a cloth and re-oxidized it returns to an insoluble state, with a blue color.

The excitement of this discovery intensified when these researchers realized that the resulting blue dye had the exact same chemical composition as the indigo plant. This fit very well with *Chazal*’s statement that the indigo plant was used to forge the genuine *techeiles* due to the similarity in color.

However, many *poskim* and chemists brought this exact point to refute the authenticity of the *Murex* dye. *Chazal* devised chemical tests to differentiate between the indigo plant and genuine *techeiles*. If the *Murex* dye possesses the exact same chemical composition as the indigo plant, then naturally any test performed on one of them would result in the same exact results when performed on the other. Thus, the *Murex* dye is clearly not *techeiles*. This objection was the most profound of those offered.

In attempt to defend their view, researchers put forth various hypotheses which state how things may have been different in the times of *Chazal*. One theory suggests that whenever *Chazal* made the *techeiles* dye, some snail meat would get mixed in with the dye, which changed the result. This argument fails from both *halachic* and scientific standpoints.

Firstly, it is highly unreasonable that *Chazal* would make a test that was based on impurities, as the test would be dependent on something that will vary from batch to batch. A particularly good batch, pure from any impurities, would then fail the test. Moreover, any outside ingredients that would have caused the test to pass could have been maliciously added, by the forgers, into the plant indigo dye as well, which would imply that it was something inherent in the *techeiles* dye that would make it pass the test. In our case, both dyes have the exact same chemical composition.

Additionally, it appears that the purpose of the test used by *Chazal* was not to determine whether or not the dye itself remains absorbed in the wool, but to see whether the color remains and is not reduced to a different color. All the items used in *Chazal*’s test are recognized by

modern chemists as fermenting ingredients. Historically, these ingredients were placed in the fermentation vats that were used in dyeing indigo to enable it to become water soluble. This observation was made by Rav Herzog himself.

If, in fact, it was snail meat that was mixed into the dye, this would seem to be at odds with what scientists claim that snail meat is actually beneficial as a reducing agent. This would not jive with this understanding of *Chazal*’s test. Also, the *Rambam* mentions the insertion of snail mucus into the vat that was used for the test. In conclusion, since the blue *Murex* dye has the identical chemical makeup as indigo, it would fail any type of test that indigo would fail, let alone the *Gemara*’s test as just described.

There are several additional facts indicating the fallaciousness of the *Murex techeiles*.

Chazal mention that although it is inevitable that the *chilazon* will die right after secreting the dye, nevertheless, the longer it stays alive, the more beneficial it is, since the dye will become clearer. The advocates of the *Murex techeiles* claim that the *Murex Trunculus* contains an enzyme in its glands that is necessary for dye formation and this enzyme decomposes several hours after the snail’s death. From the *Gemara*, however, it is clearly implied that the dye begins to degrade at the moment of death. This is precisely the value in it remaining alive a bit longer; it provides enough time to efficiently process a clear dye. If the dyeing effect would not be impaired right away but would first be impaired a few hours later, there would be more than enough time to process the tiny amount of dye inherent in a snail, and there would be no value in it remaining alive any longer.

The Recent Discovery of Literary References

Despite the clear indications that neither the *chilazon* nor *techeiles* have any connection to the *Murex Trunculus*, supporters of the *Murex Trunculus* have purportedly misinterpreted a *Yerushalmi* quoted by the *Ravya* as indicating that *techeilis* is *Purpura*, which in Greek languages refers to either the color purple or the *Murex Trunculus* snail.³⁰ Additionally, these individuals found *kisvei yad*, old

manuscripts, from the *Chavos Yair*, which mention this as well. The *Chavos Yair* concludes that the color of *techeiles* is actually purple.³¹ The same is implied in a *sefer* attributed to the *Shiltei Hagiborim* on the *klei mikdosh*, which was found with *kisvei yad*.³²

However, as the Radziner Rebbe himself points out, the implication from *Chazal* and all the *Rishonim*, and what seems to be the *mesorah* in *Klal Yisroel*, is that the color of *techeilis* is blue. The Radziner Rebbe writes that this is a basic concept that even young school children are aware of. Additionally, it is somewhat problematic to base a *halacha* on isolated writings. If there was indeed a *mesorah* that the *chilazon* is the *Purpura*, it should have been mentioned elsewhere in other *seforim* from the past thousand years. None of the *gedolim* during the times of the Radziner Rebbe ever discounted his arguments based on this claim. It is therefore clear that no one was aware of such a *mesorah*. Quite possibly, the *Chavos Yair*, who was under the impression that *techeiles* is purple, came to this conclusion on his own, based on the fact that the basic dye of the *Murex Trunculus* is purple.

Passing *halachic* rulings based on *kisvei yados* discovered long after the author lived is itself quite dubious in the eyes of the *poskim*, as the authenticity and integrity of each word is questionable.³³ This is even more so in a situation such as ours where such a *mesorah* ought to have been mentioned elsewhere. Thus, the fact that the physical features of the *Murex Trunculus* do not resemble the *chilazon* as described by *Chazal*, and the fact that its chemical properties are identical to indigo, would lead one to believe that the *Murex techeiles* is not authentic.

The Conclusion

As we stated, this article is merely a brief overview of this most difficult, challenging and enigmatic topic. There are many more details, particulars, and other pieces of information and minutia that have been discussed by the many *rabbonim*, *poskim*, scientists and researchers who have devoted

themselves to this matter. We have tried to present the major issues.

The most recent proposal of the *Murex Trunculus* has not been met with universal acceptance to any extent. None of the signs mentioned by *Chazal* are clearly inherent in the *Murex Trunculus*. In fact, the impetus to find grounds for support of the *Murex techeiles* was based on archeological findings and not on the similarity of features mentioned by *Chazal*. Only after it was recognized that the *Murex Trunculus* had been discovered in the ancient Phoenician area where the *chilazon* had originally been hunted centuries ago, did these researchers attempt to reconcile their findings with the descriptions found in *Chazal*.

It is quite possible that all the archeological findings were linked to the purple dyeing industry well ascribed in literature to that ancient area and not the blue *techeiles* which involves great effort to produce. The fact that marine experts cannot identify the genuine *techeiles* can be due to either insufficient knowledge of the marine wildlife or the general extinction or migration of the *chilazon* creature, which will definitely return only when *Moshiach* arrives.

It is interesting to note that the supporters of the *Murex Trunculus* have been busy conjugating speculative arguments to defend their approach, making it seem like it is the duty of their antagonists to disprove them, when they have never pre-

sented any concrete proof that the *Murex techeiles* is genuine.

Performing a Mitzvah With a Questionable Item

Quite a number of *poskim* maintain that there is no requirement to perform a *mitzvah* with an item regarding which there is a doubt whether one can fulfill a *mitzvah* with it.³⁴ Even those who disagree with this principle in general would most likely agree to it with respect to the so-called *Murex techeiles*, where the available evidence overwhelmingly demonstrates that there are numerous questions regarding each of the various proposals.³⁵ Additionally, *halacha* mandates that *lechatchila*, unless genuine *techeiles* is used, *tzitzis* should be the same color as the garment. Obviously, if the *techeiles* being used is not authentic, the *tzitzis* do not conform to this *halacha*.

It is mentioned in the name of the *Arizal* that according to *kabbalah* one should refrain from wearing *techeiles* made from the indigo plant. Since the *Murex Trunculus techeiles* is quite convincingly considered indigo, there is definitely a reason to refrain from wearing it.³⁶

■ *Halacha Berurah* is deeply grateful to Dr. Mendel E. Singer, Ph.D., School of Medicine, Cleveland Ohio, and Dr. Yoel (Jonathan) Ostroff, Department of Computer Science and Engineering, York University, Toronto, Canada for reviewing this article.

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|--|-----|---|-----|---|
| מדרשה אצל מומחים. | 28. | שבסוף ספרי התכלת מראדזין, ומהספר גופא. | 1. | במדבר טו:ח. |
| כל הדברים שנכתבו לקמן הם מדרשה אצל מומחים וממה שמעתי ממוסקי זמנינו. ע"י ראב"ה במס' ברכות דף טו. סי' כה שהביא ירושלמי שפירוש זמן משיכיר ודל' וגרסינו בירושלמי בין תכלת לכרתי בין פורפירין ובין פריפנין, והוא מעיל שקורין בלשון לעז' פורפירא ויש שדומה לו קצת, ע"ש. וידוע ששמו של דג המיוקס הוא פורפירין ביונית, ממ אין לפרש שמשיכיר הירושלמי אח"כ הוא פירוש על מה שכתוב לעיל בין תכלת לכרתי אלא הוא סימן שני לידע זמן משיכיר, והמעין הטיב בין האמת. | 29. | ע"י מס' מנחות דף מב. ומג. | 2. | ע"י מס' מנחות דף מב. ומד. |
| ע"י מקור חיים סי' יחג. | 30. | ע"י תפארת ישראל בהקדמה לסדר מועד, ויש שרצו לדייק כן מדברי הרמב"ם ריש הל' ציצית שבהלכה א' מפרק ב' מהל' ציצית לא נזכר שהוא מהחלזון רק שתהיה צביעה ידועה שעומדת ביופיה, אכן ע"י משנה למלך בהל' כלי מקדש ח"ג, וע"י ספרי התכלת מראדזין שהאריך בזה, ואכמ"ל. | 3. | ע"י רמב"ם הל' ציצית אג, וע"י השגות הראב"ד שם, וע"י רש"י ותוס' במס' מנחות ריש פרק התכלת. וע"י טור בסי' יא שפסק כרש"י ותוספות, וע"י מ"ב סי' ט"ו, וסי' יא ס"ק נ"ח. |
| ע"י שבת חיים סי' יחג. | 31. | ע"י מס' מנחות דף מג. | 4. | ע"י מס' מנחות דף מג. |
| ע"ש בסי' עט, וע"י ספר לולאת תכלת עמוד ק' שהביא לשונו. | 32. | ע"י מס' מנחות דף מד. | 5. | ע"י רמב"ן, במדבר טו:ח. |
| ע"י קובץ אגרות חז"א, וכן איתא בשאר פוסקים. | 33. | ע"י שיר השירים רבה ד"א. | 6. | ע"י במס' מנחות ריש פרק התכלת בענין אם תכלת מעכב את הלבו, וע"י רמב"ם ריש הל' ציצית. |
| כן אומרים בשם הגר"ח מברסקי זצ"ל, וע"ע בחוות דעת ביר"ד סי' קי, וע"י תשובה שפירסם הגר"ש מיללער שליט"א על ענין התכלת ומה שהאריך שם בענין זה, וע"ע בספרי התכלת מראדזין. | 34. | ע"י מס' מנחות דף מה. | 7. | ע"י ערך חידוש התכלת שבסוף ספרי התכלת מראדזין. |
| ע"י בתשרי הג"ל, וכך שמעתי מכמה פוסקי זמנינו. | 35. | ע"י שיר שבת דף כו. וע"י ספרי התכלת מראדזין. | 8. | ע"י מס' מנחות דף מג. |
| ע"י שרע"ר ורמ"א בסי' ט' סע' ה' ומש"כ במ"ב שם. | 36. | ע"י מס' שבת דף עה. וע"י תוס' שם. | 9. | ע"י תולדות תנאים ואמוראים ערך רב אחאי, וע"י אגרות רב שירא גאון, אכן ע"י תוס' במס' כתובות דף ב. שהיה מאמוראי בתראי. |
| ע"י בן יהוידע על מס' ב"מ דף סא. | | ע"י ספרי התכלת מראדזין וערך חידוש התכלת בסופו. | 10. | ע"י מדרש תנחומא פר' שלח פרק ט"ו, וע"י במדבר רבה יז:ה. |
| | | ע"י דרשות הר"ן. | 11. | ע"י רמב"ן שמות כח:ב. מובא בספרי התכלת מראדזין עמוד ו. |
| | | ע"י ספר של הרב הרצוג, ובענין שיטות תוס' ע"י שו"ת אג"מ יו"ד ח"ב סי' קל"ג באריכות. | 12. | ע"י ספרי התכלת מראדזין וגם בספר שהוציא הרב הרצוג על ענין זה. |
| | | ע"י בספרי התכלת מראדזין, וע"י רבינו גרשום במס' מנחות מא. בענין רב יהודה כשמסר גלימא עם תכלת לקצרא ומפייסו שיוהר שלא יקלקל מראה התכלת. | 13. | ע"י ריש ספר שפוני טמוני חול מראדזין, והוכיח זה ממה שנתן הרמב"ם סימנים שלא מצינו בחז"ל כגון שהיו שחור. |
| | | | 14. | הרבה מהדברים בא מערך חידוש התכלת |

Ask the

Gedolei Haposkim

שאל זקנד דיאמרו לך

Horav Dovid Feinstein

Rosh Yeshivah, Mesivta Tiferes Yerushalayim

Horav Yisroel Belsky

Rosh Yeshivah, Yeshivah Torah Vodaas

Horav Shlomo Miller

Rosh Kollel, Kollel Avreichim - Toronto

In addition to the *limud hatorah* that is generated by this column, the purpose of this column is twofold. Firstly, it is to provide the general public with an available forum to present questions in all areas of *halacha* to the leading *poskim* of our time. Secondly, it serves to alert readers of common *shailos* that some people are bothered by and may go unnoticed by the general public.

Please note that this column is not aimed at tackling well-known halachic disputes amongst *poskim*, nor to publicize or promote the view of a particular *posek*. Additionally, this column clearly does not take the place of local *Rabbonim* who should be consulted constantly with regard to all *shailos*.

Free Offers and Cancellation Periods

Q: A company offers free iPods to individuals who get five people to subscribe to one of the offers of their advertisers. One of the offers is a magazine subscription which offers a thirty-day cancellation period. **Question:** Is a person permitted to sign up for these offers with the express intent to cancel before the thirty-day period, but still enable his friend to receive the free iPod for his soliciting efforts?

Rav Dovid Feinstein's Response:

Such a question must be addressed to someone very familiar with business tactics. In many instances, companies are willing to offer rewards in order to solicit customers even if they have the option to cancel. Quite often, it is worth it for them, since many people forget to cancel and end up paying. Others, although originally sure that they won't like it, reconsider and do end up liking it. There are a number of variables, but an honest assessment must be made.

Copying Music

Q: Is there anything halachically wrong with copying music to give to someone else, without the copy-right owner's permission, or without compensating the owner? Is it stealing?

Chana L.
Brooklyn, NY

Rav Yisroel Belsky's Response:

Rav Moshe Feinstein *zt"l* said that it is not permitted to copy any item that is being sold by the creator of that item. Every time you copy it, you're taking away sales from him. Anybody who downloads it, copies it, or does something else is really just turning someone else's money into ashes. And that's really the bottom line. It's taking something from someone else.

That's very important to remember. Someone sweated nights and invested money and time in order to create a certain item that the public is interested in, and then he's ready to sell it. And then it turns out that some Internet type of enterprise gets its

hands on it, and people end up paying zero for it.

However, the concept of 'stealing' intellectual property has limitations, because in certain cases it is permitted to copy an idea. For example, if someone comes up with some idea about how to sell something, that idea is probably not subject to being copyrighted or patented. But a song is copyrighted, and people do business by selling records or tapes with songs. This is an item that brings a livelihood to people. Therefore, if you're taking it, you're taking away the livelihood of a person.

This is one of the areas where people say, "Everyone does it, and it really should be *mutar*." People copy tapes and download from the Internet. Everything becomes "public domain." There's nothing private. People just download it and copy it and they'll wipe the owner out.

But even if everyone does it, it's wrong. You're taking away something from someone and you're harming him.

The guideline here involves whether or not what you're doing is taking away a sale from the owner. One might say, if asked this question, "Oh, I would never have bought that anyway." But, in fact, you shouldn't say that. You do like it ... and you would have bought it.

However, if you buy one and make a copy for yourself so that you can have, say, one in the car and one at home - that kind of copying is permitted. No one buys two of something for such a purpose, so copying the merchandise in this case doesn't take the place of a sale. If you told a person who wanted one copy for the house and one for the car that he had to buy two, he wouldn't buy two. He would figure out a way to carry it back and forth each time. Since buying two copies for such a purpose is never done, making a copy for yourself for two locations is not taking away a sale.

Cleaner Tags, Extra Buttons and Torn Belt Loops

Q: If a cleaners tag is stapled onto a jacket, may one go outside with it on Shabbos?

Lazer K.
Lakewood, N.J.

Rav Shlomo Miller's Response:

Preferably, one should remember to remove a cleaner tag before *Shabbos* and not walk outside with it on *Shabbos*, for since he plans on taking it off after *Shabbos*, it might not be *botul* to the *begeid* and would be considered carrying. However, if it was not removed, one may wear the jacket on *Shabbos*, as the basic *halacha* is that it is *botul* to the jacket in all circumstances, since it is not *choshuv* at all. Thus, even though one plans to take it off after *Shabbos*, that does not give it any *chashivus*, as he is taking it off to throw it out because it's worthless.

This is unlike a torn belt loop where the *Mishna Berurah* is *machmir* if one plans to sew it back on after *Shabbos*. In that case, even if the loop is inexpensive, it has a *chashivus* due to the fact that one intends to utilize this very loop after *Shabbos*. The case of the cleaners tag would be analogous to the case of *tzitzis* which tore and one plans on discarding them after *Shabbos*. In such a case, the *Mishnah Berurah* rules that it may be worn on *Shabbos*.

Extra buttons are considered *botul* to a *begeid* even if one plans on utilizing them in the event that buttons fall off. Since it is the *derech* to wear them on the *begeid* in that manner, they are *botul* to the *begeid*. In most cases, people never end up using the extra buttons anyway and they just remain on the *begeid*.

Please send questions to Ask the Gedolei Haposkim, c/o Halacha Berurah, 1341 East 23rd Street, Brooklyn, NY 11210-5112 or to asktheposkim@thekosher.net. All questions should be submitted in English. Please include contact information, including a name, city, state and phone number, which will be used solely to ensure the accuracy of the *shailos* submitted. Questions submitted

will be selected randomly and presented to one of the gedolei haposkim on the panel. We cannot guarantee that every question we receive will be printed. Questions submitted may be edited for content and will be presented to the *posek* verbally. The *posek's* verbal response will be transcribed and reviewed by the *posek* for accuracy.



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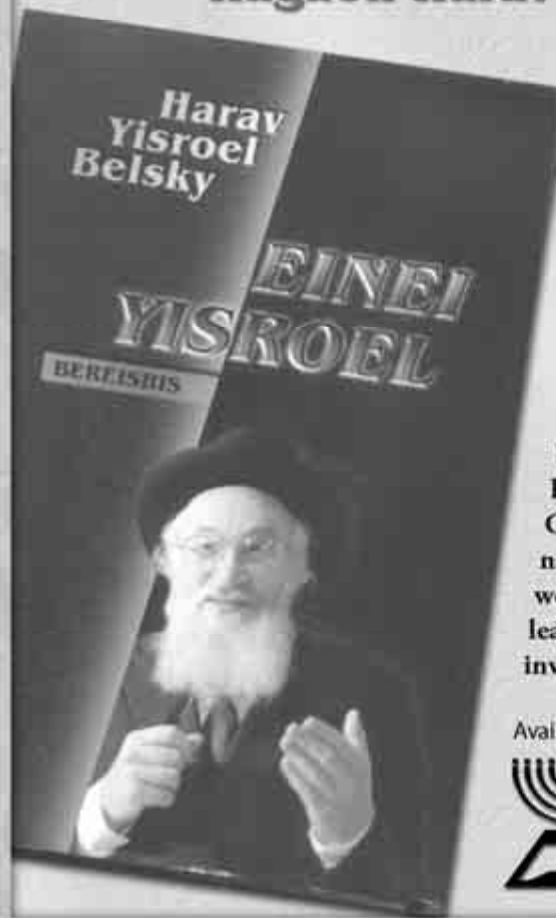
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