VOL. כ"ב / NO. 6 NISAN 5774 / APRIL 2014

בס"ד

THE Daf HaKASHRUS

A MONTHLY NEWSLETTER FOR THE OU RABBINIC FIELD REPRESENTATIVE

SPRAY COOLERS

A Kashrus Perspective

RABBI YONASON SIGLER

RFR, India

MANY MASHGICHIM are familiar with spray dryers and the challenges involved in kashering them. Less common and less well known are spray coolers. They accomplish the same task as spray dryers – turning a liquid product into a dry powdery product - and use some of the same technology. A spray cooler, however, works in a fundamentally different way from a spray-dryer and, as we will discuss shortly, is considerably easier to kasher.

Why would a company choose to use a spray cooler instead of a spray dryer? Let us explain, first, the principles of each. Spray drying involves spraying a liquid product into a chamber where it is met by a flow of hot air that evaporates the liquid component of the product and leaves a dry, powdery product. In contrast, in spray cooling the liquid spray is met by a flow of cold air that causes the droplets to congeal into small solid beads. Spray cooling, in fact, works in much the same way as the natural production of snow or hale; tiny drops of water are frozen by the cold air.

In a nutshell: spray drying is based on evaporation and spray cooling is based on congealing.

There is one big difference, though, between spray cooling and snow making, and with this we will understand when a spray cooler

continued on page 37

A REVIEW OF THE RAILCAR LINING PROCESS

The Kashering Implications

RABBI YITZCHAK TWERSKY

RC, Transportation, Oils

COMPANY X has newly leased railcars which they would like added to their kosher fleet. The company reports that these cars received a new interior lining and they wish to know if the process of applying the lining satisfies kashering requirements. In other words, does the lining process itself constitute, by its very nature, a kashering that would replace the need for conventional kashering?

WHY RAILCARS ARE LINED

Railcar interior linings have two main functions. Primarily, they are used to protect the commodity shipped from being contaminated by corrosion from the metal of the car. In addition, coatings prevent the base metal itself from deteriorating due to the chemical nature of certain commodities carried within the car. However, not all railcars are lined. Whether or not a railcar is lined depends upon the intended commodity to be hauled. Some commodities, such as oils, are neither harmful to the car nor sensitive to the bare metal and do not necessitate a lining all together. A previously unlined railcar will receive a lining if it is transferred to a type of service which requires a lining. Linings as well tend to deteriorate over time and even a railcar which was previously lined will eventually need a new lining.

continued on page 36

GRANDFATHERS

RABBI RANAAN BRODERICK

RFR, Kansas, Texas, Oklahoma, Nebraska, Arkansas

GRANDFATHERS. This word is translated literally by Webster's dictionary; "the father of one's father or mother". To many, this word evokes a loving memory of a sweet elderly gentleman, often soft spoken, whose visit brings smiles to the entire family. For some the memories may be of a master storyteller, for others, a treasury of treats or candy.

However, if one continues reading there is a second definition; "to exempt (something or someone) from new legislation, restrictions, or requirements". This is a very common yet astounding concept in U.S. law. In many situations where things have been done a certain way, even if a new law has been put in place, there is no requirement to change what has been done. This is evidence of how difficult change can be.

I recall once when walking to shul on Shabbos, I noticed passing a house under construction. Week by week, I kept seeing them demolish the house part by part until they were left with just one room. From there they started to rebuild the entire house. Why did they do this? That last little room allowed them to be 'grandfathered' in. As long as there was a part of the original house intact, the house would be governed by the older zoning, and not by the newer, less people friendly, government empowered, more expensive rules.

In the Kashrus world, this is one of the most challenging tasks that we face. Many of the managers or employees that we come in contact with on a regular basis have been running their business a certain way for many years. Representing the Kashrush agencies, we visit, and introduce them to new ways of doing things, and ask them to change what they have been doing for months and often years. Old habits are very hard to break.

continued on page 41

Published by the Orthodox Union, Eleven Broadway, New York, NY 10004

Please direct your comments to RABBI YOSEF GROSSMAN, EDITOR at 212-613-8212 or GROSSMAN@OU.ORG

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RAILCAR

continued from page 35

THE PRE-LINING PROCESS

Several production steps are typically followed when applying a lining:

- Steaming
- Pre-baking
- Blasting
- Application of the lining/interior coating
- Curing

In preparation for the lining, the car is thoroughly cleaned. Typically, steam is applied to the interior to loosen residue which, is subsequently flushed out with caustic detergents as necessary. This procedure is not a kashering, and in fact may worsen the situation. When steam is introduced, the car contains residue which, through the steam, is absorbed into the car, making the car a *ben yomo*. Additional steaming would be inadequate to kasher even after the residue has been removed.

After the car is cleaned, many lining shops will perform what is referred to as a pre-bake. During pre-baking, the railcar is heated to a temperature of about 400°F for several hours. As explained by Dave Gildea of Union Tank Car Co., this procedure is done to a car which has previously hauled oil-based commodities and is receiving a lining for the first time. In such a scenario, the concern is the new lining may not properly adhere to the car due to the oils absorbed within its walls. Prebaking of the car is therefore performed to purge the absorbed oil. Such a procedure, if performed, certainly qualifies as a libbun kal. Accordingly, perhaps we can safely assume that for cars previously hauling common non-kosher commodities, such as tallow and non-kosher oils, a prebake/kosherization has been performed prior to the lining of these cars. However, such an assumption is premature as it does not address the potential of an oil-based product hauled in an already lined car or the hauling of non-oil based products (e.g. grape juice). In both aforementioned scenarios, a prebake would not be required. Moreover, information provided by Mr. Jay Grove of GATX Rail Co. indicates that some rail shops have only recently begun adopting this prebake procedure and it is questionable whether it is an accepted industry-wide standard. However, since in many instances a prebake may have been performed, it his highly advisable to inquire if such is the case, thus eliminating the need for additional kosherization.

The next step after steaming the car (or prebaking when applicable), is "blasting". Blasting is a process similar to that of sanding wood, where the objective is to groom the surface of a particular material to make it suitable for a coating. In our case, fine particles of either sand, glass, or steel are propelled against the car's interior. This procedure alters the surface texture of the car from smooth to a rough, bumpy texture which is ideal for superior coating adhesion. In the event a lining needs replacing, "blasting" will simultaneously remove the old lining and prepare the surface for the new lining. Blasting obviously does not constitute a kashering.

THE LINING PROCESS

Technically, railcar coverings are applied in two forms: as a coating and as a lining. A coating is defined as paint-type covering applied in one or many thin layers to the interior of the railcar. Coatings are typically made from phenols or epoxy resins and applied via spray guns or paint applicators. Their precise chemical composition and thickness depends upon the commodity being shipped and the type of railcar. A lining is defined as a sheet-type material made from rubber, glass or metal, of greater thickness than a coating, applied to the interior of the car. Cars used in food grade service are typically coated and not lined. Since there is no kashrus-related ramification between coatings and linings we will loosely use the two terms interchangeably.

As it stands, the only possibility to consider the lining procedure an inherent kashering lies in the coating process itself. One possible reason for leniency is that perhaps a vessel which receives a new lining is conceptually a new vessel, redefined solely by the new lining. This is because the lining serves as a barrier between the product and any taste absorbed in the walls below the coating. This would allow us to disregard any non-kosher bliyos contained within the walls of the railcar, and we now only consider the coating as the wall of the car. A precedent for such logic can be found in *Magen Avraham* (451:27 quoting the *Ra'eim*) who permits chometz vessels lined with a new layer of tin for Pesach without kashering. One of the *Ra'eim's* reasons is that because of the lining, the vessel is treated as a new vessel and the absorbed chometz below the new coating does not penetrate into the food. Similarly, when a new lining is applied to a railcar, we no longer need to be concerned with the contents absorbed within the walls. However, since several achronim disagree with the *Ra'eim*, it would seem that this reason alone would be insufficient for us to accept the lining process as a kashering.

The primary reason to accept relining as kashering is that coatings are generally heat-cured after they are applied, a process which may constitute a *libbun kal*. In actuality, there are three methods of curing, dependent upon coating type: an air-dry cure, low-bake and high-bake cure. An air-dry cure obviously does not qualify for kashering. Yet, even low-bake heated cures do not constitute a kashering, as low-bake cures are achieved with a maximum metal temperature of only 250°F. Coatings requiring a high-bake cure can have manufacturer recommended curing temperatures up to as high as 375°-400°F (to be held for 1.5hrs), which would be technically acceptable as a libbun kal. In practice however, Mr. Dale Chrisman of Trinity Rail relates that some lining shops feel they can sufficiently achieve a high-bake cure with temperatures of 300-350°F for a duration of 8 hours. In regards to kashrus, such temperatures are just below the accepted threshold for *libbun kal*, which is assumed at 375°F. And, although this temperature is maintained for an extended period of time, namely 8 hours, nevertheless, Rav Belsky was reluctant to accept anything lower than 375°F as *libbun kal*.

THE HALACHOS OF טלאי

Because of the varying industry standards, it seems that a lined railcar is not necessarily a kashered railcar. In fact, it would appear that a lining on a railcar may make matters worse, to the point that it cannot be kashered at all. The *Shulchan Aruch* (OC 451:13) rules that if a utensil was used for chometz and then a metal plate or disc was subsequently fashioned onto that utensil (as some type of patch), hagaloh is now ineffective. Two reasons are given for this halacha. Firstly, we are concerned with the possibility of actual chometz trapped underneath the added metal plate. Secondly, the metal plate inhibits the effect of the hagaloh water upon the vessel wall underneath. However, if the plate was added before the utensil was used for chometz, standard hagaloh can be performed. Ostensibly, applying a lining to a unlined railcar which has thus far been in non-kosher service is analogous to the case where metal is added to an already used non-kosher utensil to which hagaloh cannot be performed.

Fortunately, the *Mishneh Brura* (451:76) paskens that the primary reason that hagaloh is ineffective in the above scenario is due to the concern of food particles beneath the metal patch. If it can be proven that there is no concern of actual particles, we can safely assume that hagaloh penetrates the additional metal plate and completely removes all absorbed taste. Therefore, the *Mishneh Brura* rules that once the utensil is an eino ben yomo and we are certain that there are no actual particles, hagaloh may be performed. Hence, we may be lenient to use hagaloh when kosherizing lined railcars since prior to applying the lining it is necessary to meticulously clean the surface underneath from all particles. Moreover, explains the *Mishneh Brura*,

continued on page 39

לא באתי אלא לעורר

ACHRIYUS CHAMETZ

RABBI ELI GERSTEN
RC, Recorder of OU Psak and Policy

THE TORAH (*Shemos* 12:19) writes שבעת ימים שאר לא ימצא בבתיכם (For seven days, sour dough may not be found in your homes). The Gemara (*Pesachim* 5b) explains that the issur of *bal yira'eh u'bal yi'matzei* is not limited to owning chametz on Pesach, but also includes accepting *pikdonos* (items to watch) of chametz from a non-Jew. *Shulchan Aruch* (O.C. 440:1) rules that if one has responsibility of a *shomer sachar* (lost or stolen), or perhaps even only of a *shomer chinam* (negligence), one is required to destroy the chametz before Pesach. As relates to bitul (nullification), chametz of a non-Jew is even stricter than chametz that belongs to a Jew. Although one avoids the Biblical prohibition of *bal yira'eh u'bal yi'matzei* through bitul, this would not help for a *pikadon*. One cannot exempt themselves through bitul, since the *pikadon* does not belong to them. *Magen Avrohom* (440:1) explains that the *k'nas* (penalty) of chametz she'avar a'lav ha'Pesach applies to chametz that was wrongfully watched over Pesach, even though the chametz never belonged to a Jew. However, there are many details; such as what type of responsibilities were accepted? Was this just a verbal agreement, was there a valid kinyan, is there achriyus according to dina d'malchusa? Is the chametz on Pesach on the Jew's property, and was it agreed that a specific location would be designated for the chametz (מיחד לו מקום)?

This question is extremely relevant for Jewish owned co-packers and storage facilities. Even if they don't own or produce any chametz on Pesach, the chametz that they are storing can become *chametz she'avar alav ha'Pesach*. Products made with these ingredients could not be certified. So how should a company deal with chametz that is not theirs? The *Mishna Berurah* (440:4) writes that if a Yid has a pikadon of chametz from a non-Jew, since he is otherwise required to destroy the chametz, he may sell the chametz together with the location where the chametz is located.

Example: A Jewish owned storage facility, stores various vinegars, including malt vinegar, for clients in designated tanks. Bidieved, since they were *mi'yached makom*, *Mishna Berurah* (440:3) paskens that the vinegar would not become assur after Pesach. In this case we rely on Rabbeinu Tam that since the chametz vinegar was stored in a designated area, it is as though this area was rented to the non-Jew and is not considered *matzuy tachas yad Yisrael* (in the Jew's jurisdiction). However, *lichatchila*, they should arrange a mechira. Additionally, storage companies often have responsibility to deliver the product upon demand. If the customer were to request delivery on Pesach, the vinegar would become assur when it is transported in the Jewish owned tanker trucks. Therefore, a special *mechira* must be arranged.

Example: A Jewish owned co-packer packs yogurt with cookie crumbs for a client. The cookie crumbs belong to the non-Jew. Because the co-packer has *achriyus*, he must sell the chametz. Even after a *mechira* is arranged, he still may not produce with these crumbs. They must be set aside, until after Pesach.

LIMITED LIABILITY CORPORATIONS (LLC)

The OU follows the opinion of Rav Moshe Feinstein zt"l (Igeros Moshe Evan Ha'ezer I:7) that a corporation is just a *shutfus* of the shareholders. However, small shareholders who cannot influence policy are only viewed as investors. Large shareholders, whose opinion can shape policy, are viewed as *shutfim* of the company.

How do we view the *achriyus* of a corporation? Can we say that since the owners of the corporation have limited liability, this is perhaps not the type of *achriyus* that would violate *bal yira'eh u'bal yi'matzei*. *Igeros Moshe* (Y.D. II:63) in a famous teshuva explained that there is no issur of taking ribbis from a corporation, since the loan is constructed with limited liability. Rav Belsky explained that this heter is limited to ribbis (*achriyus* on loans), and cannot be applied to chametz. Regarding chametz the *ikar* is whether the chametz is considered *matzui b'yado*.

SPRAY

continued from page 35

is called for. Snow is made from water which is a liquid at room temperature. The things that go into a spray cooler are solid at room temperature. They are only a liquid because they were heated up. Examples of materials that fit this description are waxy and fatty substances – glycerides, stearates, and some emulsifiers.

We can see, therefore, that spray coolers have a much narrower range of application than spray dryers. Spray dryers can be used any time you have a solid dissolved in a liquid – coffee, milk, etc. - and you want to get rid of the liquid. Spray coolers can only be used for the kind of materials mentioned above.

Now let us describe the components of both systems. Externally they look very similar. The central component of both systems is the spray chamber. An intake line (sometimes more than one) brings the raw material to the chamber. Another one brings in the air. In the case of a spray dryer, the air intake line has a heater on it; in the case of a spray cooler, an air conditioner.

In each case, the chamber is designed to facilitate the collection of dried material. It is typically flat on the top and cone shaped at the bottom. A duct going out of the bottom takes the dried material and the air flow to a particle separation device – typically a cyclone design – that allows the finished material to fall to the bottom, where it is collected, and the air flow to exhaust out of the top.

From a kashering perspective, the two systems are, however, very different. A spray dryer is treated as a kli rishon and requires hagalah when it is *aino ben yomo* (it is worthwhile noting, however, that, in theory, in an optimal system there would be no rise in the temperature of the chamber or the spray because the heat from the air would be completely absorbed in the latent heat of vaporization. In fact, this is one of the advantages of spray drying over other forms of drying. It can be used on temperature sensitive products such as pharmaceuticals because, if done correctly, the product does not have to be heated in order to dry it).

The spray cooler chamber is obviously not a kli rishon. The hot liquid being pumped through the spray nozzle is, however, an irui kli rishon. Although the product is cooled immediately upon entering the chamber, it likely remains above *yad soledes bo* when colliding with the interior walls of the chamber. In one factory I visited, the incoming temperature of the melt was 176° F (80°C) and the temperature of the final solid product when it came out of the bottom was still 140° F (60°C). These numbers are typical for the fatty substances that spray coolers are used for.

continued on page 41

DAF NOTES

In Part 1 of this article, Rabbi Juravel discussed DIRTFT (Do It Right The First Time) as it applies to kosherization of equipment prior to actual cholov yisroel cheese production.

DIRTFT - PART 2

RABBI AVRAHAM JURAVEL

Director of Technical Services

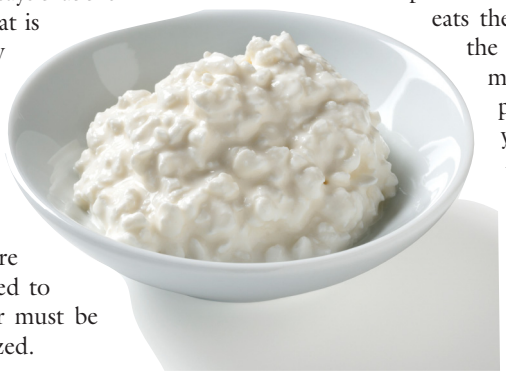
WE ARE NOW ready to manufacture kosher cholov yisroel soft cheese. We start with milk or powdered cholov yisroel milk.

At this point, the milk may go through a pasturization step. Whatever kosher ingredients the recipe calls for are pumped into a vat. And we wait....and wait....and wait until a curd forms. There are 2 methods that are generally used to get the milk to coagulate somewhat and form curds. They are the addition of acid and/or the addition of a specific cheese culture. Both of these ingredients are critical to cheese curd formation; they are the ingredients that actually turn the milk into cheese. The mashgiach must add these to the vat himself. Watching the worker add them to the vat does not satisfy the requirements of a kosher cholov yisroel production.

Most poskim consider soft cheese made by a non-Jew to be *gvinas akum*. Therefore, at a cholov yisroel cheese production, D I R T F T mandates that the mashgiach add the acid and cultures. After the curd forms to the proper consistency, the whey is drained off. The curd is left in a cheese vat in order for bacteria and cultures to work their magic and several hours later you have a soft curd cheese. Since every type of cheese is different, the temperature, the time, the cultures, and the general processing vary from cheese to cheese and from factory to factory. The mashgiach must be aware of the whole process flow along with the temperatures at each step of the way, so that whatever needs kashering gets kashered, and no *kovush* situations impede the production of cholov yisroel cheese.

CULTURE PREPARATION

The cheese culture is a very small packet of microorganisms that are deep frozen and defrosted. The defrosted culture is put in a medium of milk in order to grow and propogate. Today, there are a lot of cultures available that are cholov yisroel. There are cultures that are not available as cholov yisroel, and there are parts of the world where cholov yisroel cultures are not available. What is one to do in such a situation? This question is addressed by the Bais Yoseph. He advises that a non-kosher cheese culture should be used to propagate in cholov yisroel milk. Then, take a little of that first propagation, and propagate it again in cholov yisroel milk. Then, take a little of the second propagation and propagate it again in cholov yisroel milk a third time. After the three propagations, the culture that remains is a kosher cholov yisroel culture. The Bais Yoseph says that the original non-kosher culture is gone and all that is left is a kosher cholov yisroel culture. Practically speaking, the one liter beakers used for this operation should be clean before we start. If they plan on having the culture in the beaker for 24 hours or more, they must use new beakers as it is almost impossible to kasher glass. The same is true if they plan on heating the culture/milk mixture to over a temperature of 105°F. If new beakers are going to be used to avoid these problems, the autoclave/sterilizer must be kashered before the beakers go in to be sterilized.



We now fill a 1 liter beaker with cholov yisroel milk, add some non-cholov yisroel culture, and we wait for the culture to grow. Care must be taken that there is at least sixty times more milk in the beaker than culture. This sixty times as much must be measured by **volume**, not by weight. It now becomes interesting. How can anyone acertain that the culture is growing and multiplying? The answer is to check the pH of the milk/culture mixture. As the culture grows, it will produce lactic and propionic acid. These acids will lower the pH of the milk. The lab technician will know the optimum pH level that will show maximum growth of the culture. The technician will want to take a small amount of this mixture with the highest level of bacteria/culture to inoculate the next 1 liter flask of milk.

There is no way that a time can be given as to how long to wait for the culture to start growing. We have to wait for the optimum growth before taking some culture from the first beaker and adding it to the second. There are so many variables when it comes to growing cheese cultures that the **only** proper method to use is the pH test. Sometimes an hour is enough and sometimes a day is not enough. The cheese-maker and the lab technician will have a good idea of how long it will take to grow the culture. The mashgiach must see each innoculation. There is absolutely no reason for him to do the innoculation himself. Leave it to the experts - the lab technicians. They are trained for this. The mashgiach must make sure that the milk is cholov yisroel and that there is at least 60 times as much milk as culture in each flask for each innoculation. The RFR must also be aware of the fact that the milk used for growing the culture is usually sterilized before it is inoculated with the bacteria/culture. He must find out where and how this milk will be sterilized and supervise the kashering of that equipment.

RICOTTA CHEESE

This cheese differs greatly from most other soft cheese. Therefore, I am devoting some time and space to explain the D I R T F T method of producing kosher cholov yisroel ricotta or impostata cheese.

Traditionally, ricotta cheese is made from whey, not from milk. However, in today's world, it can and is made from milk (fresh or powdered), whey (fresh or powdered) or a combination of the two. The fluid milk/whey mixture is pumped into a steam kettle. Either a steam jacketted kettle is used or they use direct steam injection into the kettle. Acid is added to the liquid, the temperature is brought up to 170-180°F, and the waiting starts. They sometimes add cream into the kettle to bring up the fat content in the cheese, salt for flavor, and coloring to make the cheese lily white as the whey may give it a yellowish tinge. Antifoam and vinegar might also be added for both taste and acid content. Citric acid, acetic acid and vinegar are also used to manufacture ricotta cheese. They are usually put into a water solution and added to the tank. The acid is what causes the cheese curd to separate from the milk. Theefore it is **imperative** that the mashgiach adds/pours the acid solution into the tank as this is what converts the milk into cheese.

After the curd separates from the milk, the mixture must be strained to separate the curds from the whey. (Only little Miss Muffet eats them together without separating them.) After the straining, the curds are pumped to a filling machine where they are packaged hot. They are put in the refrigerator, and after they cool down, you have ricotta cheese.

What the mashgiach has to be aware of for a cholov yisroel ricotta cheese production differs very much from any other soft cheese production. There are no cultures used, only acid. He must physically place the acid in the kettle.

continued on page 39

DIRTFT

continued from page 38

The kettle: This must be clean, down for 24 hours, and kashered. It is a challenge to get that kettle clean. Oftentimes, there are small pieces of dried curd in the nooks and crannies of the kettle. There are no short cuts or compromises. Clean means clean.

The strainers: This can be a hand held strainer or part of the machinery that is removable. They have very small holes which make it almost impossible to clean properly. The Ramoh says to do *libun kal* in such a situation instead of *hag'ola*. When doing the libun kal, the mashgiach will see with his own eyes what the Ramoh means. An apparently clean strainer will suddenly have all kind of residue on it when the fire is applied. It is best to purchase brand new strainers and dedicate them to cholov yisroel production.

The filler: Since the ricotta cheese is packaged hot, the lines up until the filler and the filler must be kashered. They must be totally clean, and not have been used for 24 hours before kashering. The water in the kettle is brought to a boil and then pumped through the lines through the filler. Make sure that the boiling water goes through each filling nozzle. At some factories, there is a small holding tank above the filler where there is product that is waiting to go into the filling nozzles. At some facilities, there is a heating element in that small holding area to help maintain the temperature of the product. If that is the case, that whole holding tank must be filled with water and boiled in place instead of boiling water being pumped in there in order to kasher it. The heating element renders that holding tank a kli rishon, which means that the water has to actually boil in place in order to kasher it. At that point, after the water boils in place, the boiling water should be pumped through each filling nozzle.

HARD CHEESE

Hard cheese in halacha is considered any cheese where not only are cultures used, but a coagulent called rennet is also used. There are products where only rennet is used without the addition of any cultures. This product will not have much of a taste, and it is called rennet casien. Since it was coagulated with rennet, in halacha, it is considered hard cheese. In the cheese industry, mozzarella cheese is known as a soft cheese. In halacha, it is hard cheese because it is a rennet-set cheese. Halacha talks about a maamid (rennet) and a *mechametz* (cultures or acid). What is interesting to note is that **all** cheeses made with acid, cultures, or both will not only be acidic and have a slightly acidic taste, but the whey left over after the cheese making is an acid whey, not a sweet whey. When a rennet-set cheese is made, no matter the fact that cultures are also used, the whey left over after the cheese production is a sweet whey. The taste of a hard cheese will not be acidic. The cultures do actually change the taste. In fact, they actually continue to work for months after the initial cheesemaking. This is called aging the cheese. Soft cheese cannot be aged. It will spoil. Cooked hard cheese also cannot be aged. The cooking process kills the bacteria in the culture. That is why mozzarella cheese has a much shorter shelf life than other hard cheeses. The cooking of the mozzarella curd destroys most of the cultures. Other rennet-set cheeses improve with age. The cultures change the taste over time and make a truly fine cheese.

The process of making hard cheese starts with milk being pumped into a cheese vat. Usually, this milk is pasteurized before it gets pumped into the cheese vat. Obviously, the pasteurizer has to be kashered. The milk in the vat is inoculated with culture and when the pH reaches a certain point, the coagulant or rennet is added. For a cholov yisroel cheese production, D I R T F T requires that the mashgiach put both the culture and the rennet into the milk in the cheese vat. Depending on the temperature of the cheese being made, a decision will have to be made on whether or not the cheese vat has to be kashered. If it does have to be kashered, it will have to be filled with water and boiled. Some cheese factories, particularly in Europe, will manufacture the cheese at a lower temperature and then spray hot water on the curd while it is still in the cheese vat. If this is going to happen during a cholov yisroel cheese production, then the cheese vat will need to be kashered. After the cultures and rennet are put into the milk in the cheese vat, the waiting game begins. When the cheesemaker says that the curd is the right consistency, the cheese is cut. One interesting fact is that most of the mixture of curds and whey is whey. In fact, 90% of if is whey. If you start off with 10,000 lb of milk, you will only end up with 1000 lb of cheese. The rest of it is whey.

After the cheese is cut, the whey is drained off and the curd is pumped into cheese molds. The curd sits in these molds, more whey drains off and then the blocks of cheese go from the molds into a salt water bathtub known as a brine tank. For a cholov yisroel cheese production, the brine must be drained, the brine tank kashered and only then can the cholov yisroel cheese go into the fresh brine. To avoid the bother of draining and kashering, there are places that will salt the curd as it is going into the mold so there will not be a need for a brine tank.

After the cheese comes out of the mold or the brine, it is placed in a temperature and humidity controlled room to age anywhere from 1 month to 2 years. When the cheese is ready, after the proper amount of aging, it is cut and packaged. Some cheeses, such as mozzarella, are not aged at all and are sent from the brine or the mold immediately to packaging.

There is one type of hard cheese that has no aging done to it. In fact, it cannot really be called cheese. In the industry, it is known as "plastic". This is known to the consumer as American cheese. This processed cheese is made from cheddar cheese along with scraps of different types of cheese. The cheese goes into a cooking vat along with water, emulsifiers, coloring and some salts. These are cooked and blended together. Then, while still in a hot liquid state, they are pumped onto a super chilled roller/drum where they turn from a liquid into a solid. The solid comes off the roller, gets cut, stacked and packaged. To kasher such a facility, one must start with the cooker which is usually steam jacketed. Either the water and steam in the boiler must be drained and refilled or a chemical must be added to the water in the boiler in order to make it taste disgusting. After that is accomplished, the cooker must be filled with water and kashered. Once the cooker is boiling, the water in it must be pumped through the lines onto the rollers. The cooling apparatus in the roller should be turned off, and the boiling water pumped onto the the roller while it is turning. ■

RAILCAR

continued from page 36

hagaloh is only hindered in a situation where the additional metal is attached to the utensil via nails or the like. In such a case, the additional plate and the utensil are viewed as independent entities. As opposed to a case where the metal is fused onto the utensil; where in such a situation the utensil and the metal are perceived as one and hagaloh is effective. Rav Belsky ruled that this same reasoning can be applied to thin coatings and certainly where they are heat cured afterward. Therefore, conventional kashering can still be done.

IN CONCLUSION

Due to the numerous variables involved in a railcar lining process, we cannot conclusively accept newly lined railcars as kosher. Unless a very specific process has been reviewed, an RFR would still need to supervise the kashering. However, standard kashering protocols may still be followed, despite the additional new layer of coating. ■

WHAT'S THE BERACHA ON...

FRUIT AND NUTS

DESSERTS AND SNACKS	BRACHA RISHONA	BRACHA ACHRONA
Almond	*Ha-aytz*	*Borei Nefashot*
Apple	*Ha-aytz*	*Borei Nefashot*
Apricot	*Ha-aytz*	*Borei Nefashot*
Avocado	*Ha-aytz*	*Borei Nefashot*
Banana	*Ha-adamah*	*Borei Nefashot*
Blackberry[1]	*Ha-aytz*	*Borei Nefashot*
Blueberry[2]	*Ha-aytz*	*Borei Nefashot*
Cantaloupe	*Ha-adamah*	*Borei Nefashot*
Cashews	*Ha-aytz*	*Borei Nefashot*
Cherry	*Ha-aytz*	*Borei Nefashot*
Chestnut	*Ha-aytz*	*Borei Nefashot*
Clementine	*Ha-aytz*	*Borei Nefashot*
Coconut	*Ha-aytz*	*Borei Nefashot*
Cranberry[3]	*Ha-adamah*	*Borei Nefashot*
Currant	*Ha-aytz*	*Borei Nefashot*
Date	*Ha-aytz*	*Al Ha-aytz*
Etrog[4]	*Ha-aytz*	*Borei Nefashot*
Fig	*Ha-aytz*	*Al Ha-aytz*
Gooseberry	*Ha-aytz*	*Borei Nefashot*
Grape	*Ha-aytz*	*Al Ha-aytz*
Grapefruit	*Ha-aytz*	*Borei Nefashot*
Guava	*Ha-aytz*	*Borei Nefashot*
Hazel Nut	*Ha-aytz*	*Borei Nefashot*
Honeydew Melon	*Ha-adamah*	*Borei Nefashot*
Kiwi	*Ha-aytz*	*Borei Nefashot*
Mango	*Ha-aytz*	*Borei Nefashot*
Melon	*Ha-adamah*	*Borei Nefashot*
Nectarine	*Ha-aytz*	*Borei Nefashot*
Orange	*Ha-aytz*	*Borei Nefashot*
Orange Peel (even if candied[5]	*Shehakol*	*Borei Nefashot*
Papaya	*Ha-aytz*	*Borei Nefashot*
Peach	*Ha-aytz*	*Borei Nefashot*
Peanut	*Ha-adamah*	*Borei Nefashot*
Pear	*Ha-aytz*	*Borei Nefashot*
Pecan	*Ha-aytz*	*Borei Nefashot*
Peel (of Fruits)[6]	*Shehakol*	*Borei Nefashot*
Persimmon	*Ha-aytz*	*Borei Nefashot*
Pineapple	*Ha-adamah*	*Borei Nefashot*
Pistachio	*Ha-aytz*	*Borei Nefashot*
Plum	*Ha-aytz*	*Borei Nefashot*
Pomegranate	*Ha-aytz*	*Al Ha-aytz*
Prune	*Ha-aytz*	*Borei Nefashot*
Pumpkin Seed	*Ha-adamah*	*Borei Nefashot*
Quince	*Ha-aytz*	*Borei Nefashot*
Raisin	*Ha-aytz*	*Al Ha-aytz*
Raspberry[7]	*Ha-aytz*	*Borei Nefashot*
Rhubarb	*Ha-adamah*	*Borei Nefashot*
Strawberry[8] *(both wild & cultivated)*	*Ha-adamah*	*Borei Nefashot*
Tangerine	*Ha-aytz*	*Borei Nefashot*
Walnut	*Ha-aytz*	*Borei Nefashot*
Watermelon	*Ha-adamah*	*Borei Nefashot*

Clarification

FOOD	BRACHA RISHONA	BRACHA ACHRONA
Tortilla (corn)	*Shehakol*	*Borei Nefashot*
Tortilla (5 species)	*Mezonot*	*Al Hamichya*

[1] (See Igrot Moshe, Orach Chaim 85). See OU Guide for Checking Fruits and Vegetables page 45.

[2] See OU Guide for Checking Fruits and Vegetables page 46.

[3] They grow from small bushes in a bog.

[4] If prepared in a tasty manner, since otherwise it is not good for consumption.

[5] (See Mishna Berura 202:39 Chazon Ish, Orach Chaim 33b)

[6] If part of fruit is attached to peel Ha-aytz is made.

[7] See OU Guide for Checking Fruits and Vegetables page 47.

[8] (See Igrot Moshe, Orach Chaim 86). See OU Guide for Checking Fruits and Vegetables page 48.

MAZEL TOV

to our dedicated RC **RABBI YITZCHAK TWERSKY AND HIS WIFE** on the bar mitzvah of their son Dovid Yaakov.

to our devoted business manager **RABBI DOVID HIRSCH AND HIS WIFE** on the engagement of their son Mordechai to Batsheva Roberts of Lakewood, NJ.

CONDOLENCES

to the family of **MR. DAN ZUCKER,** the former long-time Director of Business Management in OU Kosher, on his recent passing.

to our dedicated RFR and Director-West Coast OU **RABBI ALAN KALINSKY AND FAMILY** on the recent loss of his father Yisrael ben Eliyahu.

המקום ינחם אתכם בתוך שאר אבלי ציון וירושלים

KASHRUS ALERT

DELISH DARK CHOCOLATE CHERRY VANILLA COOKIES, MILK CHOCOLATE CASTLE COOKIES AND MILK CHOCOLATE CARAMEL TRUFFLE COOKIES produced by Walgreen Co., Deerfield, IL contains dairy ingredients as indicated on the allergen and ingredients statements. Some packaging was printed with a plain Ⓤ, without the D-Dairy designation. Corrective actions have been implemented.

GIANT AND STOP & SHOP JALAPENO CHEDDAR CREAM CHEESE SPREAD UPC: 6882671425 with the date codes USE BY 061314 AND USE BY 070514 produced by Ahold USA, Quincy, MA bears an ⓊD and mistakenly contains non-kosher cheese. The product has been withdrawn. All other Giant and Stop & Shop cream cheese bearing an ⓊD are not affected.

WINKING COW CHEESES AND DAIRY PRODUCTS produced by Triad Food Products LLC, Woodland Park, NJ are being sold with an unauthorized ⓊD. These products are not certified by the Orthodox Union. Corrective measures are being implemented.

GRANDFATHERS

continued from page 35

When the Rabbi is present, everyone is on high alert, but when the Rabbi leaves, it is easy for the employees to revert back to old patterns. It is our responsibility as the mashgiach, not only to be the policeman, but to educate and introduce new patterns, and encourage employees to create new habits.

As mashgichim, we too must be vigilant about not falling into the habit trap. Often our job entails reviewing hundreds of ingredients, over and over again. We may be doing this at the same plant, month after month, and year after year. This can become so habitual that we can fail to pick up slight variations, which can be the difference between Kosher and non-Kosher. It is incumbent upon us to overcome this, and perform our important duties with vigilance and enthusiasm, putting conscious effort into battling the complacency of habit.

When Klal Yisroel left Mitzrayim, the Posuk says that they saw the Mitzrim dead on the land, and they believed in Hashem. The meforshim explain that until that moment, they had a slave mentality. It was so ingrained in them over hundreds of years, that the feelings didn't just disappear upon their exit. It was not until they saw their "masters" dead in front of them, that they were able to break their habit, and become Ovdei Hashem.

Yisroel Shechter, an old acquaintance of mine from a chaburah in Lakewood many years ago, recently moved to Dallas. He runs a family business called Shechter Monuments, and not long ago shared an incredible story with me. One day he received a call from a woman who needed to purchase a *matzaivah* for her father who just passed away. As part of the relevant information, Yisroel asked her what her father's Hebrew name was, and the woman replied confidently that it was Chaim. As they continued to speak she mentioned that her father's legal name was Abraham. Yisroel was quite taken aback, as generally Abraham would most likely have the Hebrew name Avraham. He asked her to please go home and see if she could locate his Kesubah and email him a copy.

Later that evening, Yisroel received an email with a scanned copy of the Kesubah. Quickly reviewing the document he sees that in every place this man is referred to as Avraham, it was clear as day, his Hebrew name was Avraham.

Quite perplexed he called the woman and gently attempted to determine why she thought her father's Hebrew name was Chaim. He pointed out that the Kesubah says Avraham and his legal name was Abraham, and asked what made her think that his Hebrew name was Chaim?

No, she replied adamantly, his name was Chaim, and let me explain it to you. She proceeded to relay the following incredible story. My father and uncle were taken by the Nazis to a concentration camp. As was an all too often occurrence, one day the commander ordered all of the prisoners out of the bunk and lined them up to be shot. As the soldiers brutally mowed them down with their machine guns, my father fainted from fear and fell. Immediately he was covered by dead bodies, and the soldiers left without realizing that he was still alive. When his fellow inmates were ordered to remove all the bodies, they discovered that my father was still alive. Knowing very well that if he returned to his bunk, he would be shot on the spot, he had to make a quick decision. In an attempt to save his life, he took the identity of his brother, my uncle, who had perished earlier in the war, and his name was Avraham. In that way he survived the rest of the war in that concentration camp. After the war was over, he moved to France where he met my mother, married, and eventually they moved to America.

Yisroel was quite moved by the story, but was still puzzled. He mentioned that he noticed the date on the Kesubah was 1948, which was a few years after the war, and in another country. Surely, the Rabbonim at the time would not have used a fake name?

The woman, her voice heavy with emotion, explained that even after the war was over, and the Nazis were defeated, her father was still so afraid of the Nazis catching him, that for the rest of his life, he lived as Avraham. However, the woman continued, my father vowed that after he died, when there was nothing to be afraid of anymore, his true name, Chaim should be engraved on his matzeva. Finally, in his death, he could be Chaim, 'reborn', for the first time since the war.

This story left an indelible impression on me. How much strength and courage is needed for us to be able to reprogram our emotions and our minds. As we approach the Yom Tov of Pesach, I believe that this is the lesson and possibly the yesod of the Chag. We need to recognize that we must change our habits both in thought and action. We must focus on serving Hashem with mindfulness, and work on re-energizing ourselves to do the same things with fresh enthusiasm. Our davening shouldn't be just another prayer, our Birchas Hamazon shouldn't be a habitual tune, and a daf gemarah shouldn't just be another page. We can take a lesson from Klal Yisroel , just as they had the ability to change their mindset, and create new habits, Hashem should give us the strength and courage to leave our old bad habits, and connect to our true grandfathers, the Avos. Chag Kasher V'Sameach!

SPRAY

continued from page 37

Since the issur is absorbed through *irui kli rishon*, a judicious use of spray balls, which is also an *irui kli rishon,* should suffice as a kashering. One might think that a standard CIP (Cleaning In Place) used for a spray cooler would be adequate for a kashering. Actually, the CIP performed in the spray-cooler mentioned above did not use water; even small amounts of residual water would contaminate their products (emulsifiers). A man simply climbs into the chamber with a broom and scrapes off any residue. Therefore, no presumption should be made that a standard CIP is adequate to kasher a spray cooler.

Although the actual chamber would at worst have absorbed issur through irui kli rishon, the feed intake and the spray nozzle of a spray cooler would have bli'os from a kli rishon and need hagala (the spray nozzle can be detached). Further, if we assume the chamber absorbed issur through irui, the downstream equipment would also require kashering since the product remains hot until it is collected (in one factory I visited they keep the collection bags open for a while after filling them to allow further cooling of the product).

With some planning, then, and an accommodation from the company to use water in a spray-cooler, developing a strategy for kashering any specific stray-cooler should be more straightforward than kashering a spray-dryer.

HARRY H. BEREN

ASK OU

OUTREACH

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RABBI MOSHE KLARBERG
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