

THE KASHRUS OF ICE CREAM

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Ice cream used to be considered a kosher-friendly dairy product. Consisting of fresh cream and sugar, with added vanilla beans/cocoa/strawberries, it was so easily made kosher.

Those days are long gone, and contemporary ice cream is one of the most challenging of dairy products out there. Let's see why this is, and try to understand what it takes to manufacture kosher ice cream in the modern era.

We will first examine the ingredients in 21st century ice cream, after which we will take a look ice cream's manufacturing process.

The basic ingredients comprise the ice cream mix, meaning the blend of liquids and powders which will later be flavored and frozen. Ice cream mix contains (1) cream, (2) possibly skim milk or non-fat dry milk, (3) sweeteners, (4) stabilizers and (5) emulsifiers.

1 CREAM: Although cream is traditionally the fatty portion of milk - referred to in the dairy industry as sweet cream - cream can also be derived from cheese production. This latter type of cream, called whey cream, is particularly kosher sensitive and is actually often used in ice cream production. The reason is that whey cream has a tangier taste



than sweet cream, and it is thus not desirable for certain dairy products. Ice cream, which has an abundance of sugar and added flavors, is able to mask the taste of whey cream and is thus a perfect "host" for it. Kashrus agencies need to vigilantly monitor cream sources and assure that problematic whey cream does not enter the manufacturing facility.

2 SKIM MILK/NON-FAT DRY MILK: These ingredients may be added to lower the fat level of ice cream. Although skim milk does not pose a kosher issue, its powdered form, referred to as non-fat dry milk, is occasionally dried from liquid into its powder form on equipment shared with non-kosher substances. This equipment, called spray dryers, is used by some companies to turn milk, juice, liquid chicken fat and shark oil into powders. Hence, non-fat dry milk is kosher-

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sensitive and is only acceptable under reliable supervision.

3 SWEETENERS: These are typically corn-syrup based sucrose and glucose; they need to be kosher-certified but are less sensitive than some of the other ingredients in ice cream. Regular sugar may also (less) occasionally be used in ice cream, and it poses no kosher concerns.

4 STABILIZERS: These are usually powdered food-grade gums (e.g. locust bean, xanthan, and carrageenan gum) which pose very moderate kashrus concerns. Stabilizers contribute to the texture of the finished product, and there is no one rule as to which of these gums, or a blend of them, is used for ice cream production. In former times, and

to a lesser extent today, gelatin - which comes from animal bones and hides - was quite commonly used as an ice cream stabilizer. Gelatin is a kashrus landmine, and its absence from most contemporary ice cream is a welcome development.

5 EMULSIFIERS: These ingredients enable the fat (cream), non-fat and air contents in ice cream to blend properly, as well as for ice cream to be eaten smoothly and to soften when consumed. The emulsifiers are commonly mono- and diglycerides (which can come from tallow/animal fat sources) and polysorbate 80 (which contains oleic acid, often derived from tallow). Emulsifiers are very serious business in terms of kashrus, and they are one of the reasons that ice cream absolutely requires tight kosher supervision.

It is obvious that buying ice cream without a reliable hechsher is asking for trouble!

Let's take a look at the ice cream manufacturing process. Here are the steps involved:

PASTEURIZATION: The ice cream mix is heated to 155 degrees F for 30 minutes or to 175 degrees F for 25 seconds, in order to destroy harmful pathogens. Since ice cream manufacturing plants at times also handle other products, the kashrus agency must vigilantly assure that the pasteurization equipment is kosher.

HOMOGENIZATION: Still hot from pasteurization, the ice cream mix is subject to intense air pressure, which breaks fat globules in the cream portion and thereby engenders a smooth texture.

AGING: The ice cream mix is cooled and left to rest for 4-8 hours, enabling the mix to partially crystallize and the mix ingredients to blend better.

FLAVORING: The ice cream mix is pumped into stainless steel vats, and liquid flavors and colors are pumped into the mix here.



Did you know?

The OU certifies more than

4,047	Ice Cream Products
719	Ice Cream Brands in...
288	Plants with the assistance of...
177	Mashgichim
60	Flavors of Cholv Yisroel Ice Cream

FREEZING: The now-flavored and colored ice cream mix is sent into a barrel freezer, and air is pumped into this ice cream mix as it enters the barrel freezer. The air contributes to the finished ice cream product's feel and ease of consumption.

ADDITION OF PARTICULATES: Small edible pieces, called particulates (chocolate chips, fruit pieces, nuts, etc.), may

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YOSHON

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The source for the laws pertaining to Yoshon (old crops) is found in Vayikra (23:9-

14). These laws are applicable to the *Chameishas HaMinim* of barley, oats, rye, spelt, and wheat. Rice, corn, buckwheat and other grains are exempt from this law.

These grains are Yoshon if they took root prior to Pesach. If the grains did not take root prior to Pesach then they are *Chadash* (new crops) until the subsequent Pesach. There is a halachic dispute if the *hashrashah* (grain taking root) must be 3 days or two weeks prior to Pesach.

There are a number of halachic discussions concerning the prohibition of *Chadash*.

1. Is it a Biblical or Rabbinic prohibition?
2. Is it prohibited only in Israel or also outside of Israel?
3. Does the prohibition apply only to Jewish owned land or does it include non-Jewish ownership?

A significant number of commentators argue that outside of the land of Israel one should be diligent in avoiding *Chadash*. However, different Rabbinic decisors discuss the general leniency in observing Yoshon outside of the land of Israel.

1. Some utilize a *sfek sfeika* (double doubt) – maybe the crop is from the previous year. If it is this year's crop perhaps it took root prior to Pesach.
2. Others suggest that most grains take root before Pesach. This is especially true in the United States since 75% of the wheat planted in the United States is winter wheat which by nature is Yoshon.
3. There are those who argue that there are a number of other factors to consider:



- a. Doubts exist if the flour is *Chadash* or Yoshon
- b. Bread is a staple (and consequently it is viewed as a *shas hadchak* (extreme need))
- c. Flour is difficult to store

4. The *Aruch Hashulchan* 10- 293:6 cites the *Ohr Zarua* who argues that *Chadash* in the Diaspora is a Rabbinic prohibition, and the Rabbis did not enact the restriction on countries that are not close to Eretz Yisrael.
5. The Bach (YD 293) maintains that there is no restriction of *Chodosh* on produce grown on non-Jewish owned fields.
6. The *Aruch Hashulchan* 10- 293:19-20 discusses why the prohibition of *Chadosh* in areas outside of Israel would only be applicable in lands in close proximity to the land of Israel as opposed to more distant countries. He compares it to the *terumos u'maasros* of Rabbinically prohibited produce for the lands adjacent to Israel.

In the United States most barley and oats are *Chadash* since they do not usually take root prior to Pesach. Canadian oats are also *Chadash* and a significant amount is imported into the United States. Domestic rye is always Yoshon; however, rye bread can be *Chadash* since it is primarily composed of spring wheat. Spelt grown in the US and Canada are Yoshon.

Wheat has both a winter and a spring crop. Winter wheat is Yoshon since it has taken root before Pesach. Spring wheat is usually *Chadash* since it does not always take root prior to Pesach. The different wheat yields different types of flour.

1. Low gluten flour is used for crumbly products such as cookies, *matzah* and pretzels. The source for this flour is winter wheat.
2. High gluten flour is used for chewy products such as bread, *challah*, pizza and bagels. It is produced from spring wheat.
3. Medium gluten flour is a mixture of spring and winter flour and is also used for bread, *challah* and pizza.

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be added to the product at this point. To accomplish this, the ice cream is sent through a fruit feeder, where particulates are incorporated, via a series of hoppers, with an auger, starwheel and blender, which move the particulates into the ice cream and distribute them evenly.

PACKAGING AND HARDENING: The ice cream is then filled into packaging, and it is immediately hardened in the containers to 10-13 degrees F below zero.

Some ice cream plants manufacture kosher ice cream as well as ice cream with non-kosher marshmallows or gum bits. Since these particulates are added at ambient temperatures, into the fruit feeder, they do not impact the kashrus of the equipment (which will be cold-cleaned after use for each type of particulate).



NON-DAIRY FROZEN PRODUCTS

Sorbet, water ice and "ice cream" made from soy, rice and almond milks are common products, which are often labeled as "non-dairy". Although the mix of these products is non-dairy, it is often pasteurized on equipment shared with (real) ice cream and other dairy products, and this equipment is typically not kashered to pareve status after use for these dairy items. Furthermore, the flavors used in non-dairy frozen desserts are prone to at times contain dairy subcomponents and/or to be made on dairy equipment. For these reasons, non-dairy frozen desserts can never be assumed to be pareve; the consumer must check with the kashrus agency in each case.

As demonstrated, ice cream kashrus is complex. That is why we recommend always looking for the OU-D symbol! We wish all readers a good Yom Tov!

YOSHON

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4. Durum wheat is needed for pasta products and it is usually a spring crop.

The following flours are usually *Chadash*: high gluten, high strength, bread, patent, clear, pizza, all purpose and graham.

Malt is derived from barley which can be *Chadash*. The malt is added to wheat flour for baking applications. The amount added is usually less than 1% by volume. The malt enhances the chemical reaction between the flour, yeast and water. It allows the dough to rise better. Barley malt is added to all grocery flour. Flour made especially for baking cakes and cookies do not contain malt. Barley malt can be added to some foods for coloring and flavoring. These products include pretzels, candies, cereals (such as Corn Flakes), beer, vodka, gin, cordials and prepared cocktails. There is a halachic discussion if the malt added to the above applications can be considered *botel*. The *Chadash* malt can enter the market as early as December 15.

Matzah meal is ground matzah and is, therefore, *Yoshon*. Rye crackers are *Yoshon* provided that the wheat, oats and malt listed in the ingredient panel are also *Yoshon*. One must be careful with oatmeal cookies since both the oats and the wheat flour must be *Yoshon*. Pizza stores sometimes line the oven wall with semolina flour. Therefore, in addition to the pizza one must be certain that the semolina flour is *Yoshon*.

Products from Israel bearing a reliable Kosher supervision are *Yoshon*. Products imported into Israel are not necessarily *Yoshon*. If a package has multiple *hashgachos* and also states *Yoshon* then one must ascertain which kashrus agency assumes responsibility for the *Yoshon* status of the product.

The OU policy is that equipment which produced *Chadash* products must be *eino ben yomo* (more than 24 hours since previous usage) in order to produce *Yoshon* products. This policy is based on the *Sha'agas Aryeh's* (*Sha'agas Aryeh Chadashos Dinei Chadash* Chapters 1-2) opinion that *Chadash* is a Biblical prohibition even outside of the land of Israel and, therefore, the standard rules of *taam k'ikar* (taste of food is regarded as equivalent to its chodosh substance) apply. Rav Aharon Soloveitchik, zt"l was also careful that the manufacturing equipment should be *eino ben yomo*.