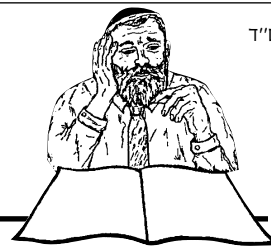


THE Daf HaKashrus



A MONTHLY NEWSLETTER FOR THE  RABBINIC FIELD REPRESENTATIVE

INGREDIENT PROFILES: HIGH FRUCTOSE CORN SYRUP (HFCS)

BY RABBI GAVRIEL PRICE
Ingredients Approval Registry

Most of us (with the exception of some of our more junior associates) did not, as children, have high fructose corn syrup in our foods. But as frequent visitors to food production plants around the country it has been hard not to notice that high fructose corn syrup has quickly become the primary sweetener in everything from soda pop to peanut butter. Where did high fructose corn syrup suddenly come from? What happened to sugar?

Until the late 1950's there was no such thing as high fructose corn syrup because, until that time, people had operated with the understanding - a correct understanding, in fact - that there is no fructose in corn syrup. Corn syrup contains another sugar molecule, considerably less sweet than fructose, called glucose. In 1957, a group of researchers developed in their laboratory an enzyme called glucose isomerase that remarkably - actually, astonishingly - could work on corn syrup to rearrange the molec-

ular composition of glucose and convert it to fructose. Glucose isomerase brings about the isomerization, or rearrangement, of glucose, hence the name. The more that the natural glucose in corn syrup is converted by the enzyme to fructose, the sweeter the syrup becomes. High fructose corn syrup means that a high percentage of the glucose is converted to fructose. Corn syrup, typically a mildly sweet sweetener, suddenly had the potential to become strikingly sweet.

The significance of this simple conversion was not lost on United States corn refiners who, because of federal subsidies and other reasons, have no lack of corn to work with. Federal and industrial research was anyway fervently researching new things to do with all the corn produced here (which brings up a tangential, but important, point: the ubiquity of corn in this country plays a role on presumptions that kosher certification agencies make when evaluating certain Pesach questions: do we require that during Pesach a Jewish-owned company sell to a non-Jew ingredients in his warehouse like vinegar, or ethanol, or vinegar-containing ketchup, ingredients which may be derived from *chametz*? Since the vast majority of alcohol and vinegar is corn-based in this country, in cases where we cannot determine the specific raw material

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TORAH THOUGHTS ON THE TSUNAMI

BY RABBI YOSEF GROSSMAN
RC, Editor - The Daf HaKashrus

צדקתך בהררי אל משפטיך
תהום רבה (תהלים ל"ז, א')

The grieving father in ירושלים evoked this *Posuk* in his moving *Hesped* over his young daughter O'H. Your צדק - Your righteousness Hashem is like

the mighty mountains - like the awesome Mt. Everest in the Himalayas, the father explained. Few have seen or scaled this mountain's top, but it has been done - it can be done. The צדק of Hashem can vaguely be perceived and understood by the human mind, but משפטיך - Your judgments - Your מדה הדין Hashem תהום רבה are like the vast deep waters - unseen by the human eye - not comprehended by the human mind.

In the aftermath of the recent horrific tsunami which as of this writing has claimed over 220,000 lives and created 5,000,000 homeless, who can say that they clearly understand the ways of Hashem. Nevertheless, Hashem is calling out to us - He is sending us a message. As Rav Shimon Schwab זצ"ל beautifully points out, we need to try to understand what that message possibly might be.

אשרי איש שישמע למצותיך ותורתך ודברך ישים על לבו
(מתפילת עזרת אבותינו)

Which דיבור of Hashem are we referring to which is not already included in מצותיך ותורתך - the Torah and Mitzvos of Hashem?



Scene of Destruction

asks Rav Schwab זצ"ל in his classic *Sefer* - מעין בית השואבה.

Rav Schwab responds based on a *Ramban* in *Chumash*. Following the death of Nodov and Avihu, Moshe says to Aharon דבר אשר הוא היה לאמר בקרבי אקדש. The *Meforshim* wonder where do we find that Hashem uttered the words אקדש? Answers the *Ramban* that indeed these words were never spoken by Hashem. However, the actions of Hashem are His very words. Through Hashem's act

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TSUNAMI

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of taking the lives of Nadav and Avihu, Hashem is talking to us and informing us that בקרבי אקדש.

Concludes Rav Schwab זצ"ל

ולדברי הרמב"ן א"ש, שמי שנגזרה עליו גזירה מן השמים זהו הדיבור המיוחד אליו והיינו "ותורתך" כפשוטו, וגם "דברך" הן הגזירות והמאורות והרפתקי דערו עליה "ישים על לבו"

The events which happen in a person's life are words and messages from Hashem. Praiseworthy is the individual who places these messages from Hashem on his heart and meditates as to the meaning of Hashem's message to him.

When a calamity of unspeakable proportions strikes the world, there is certainly a דיבור – a message of Hashem to mankind. Praiseworthy are those who are included in ישים...ודברך ישים על לבו.

For sources to help us in possibly understanding the דיבור of Hashem concerning the tsunami please refer to the following: (copies are available by contacting this writer.)

- (צפניה ג, 1) הכרתני גוים... אמרתי אך תראי אותי תקחי מוסר
- דרשות הר"ן דרוש ששי - ולפעמים מתחדשים מקרים ברחוק מקום
- רבינו חננאל ברכות נג. ועל הויעות...כי בעת שרואה הקב"ה צער ישראל
- אגרות ומאמרי החפץ חיים י"ב מאמר מה לך נרדמ?
- אור גדליהו ספר שמות, פ' שמות עמ"א אמנם מצינו...על הא דב' לבו חזו מפעלות ה' אשר שם שמות בארץ
- דף הכשרות - דף השנה ח' עמוד ח' רב שמעון שואב זצ"ל - רוקע הארץ על המים - המכין מצעדי גבר
- שם רב יוסף טירנואר המביט לארץ ותרעד

נודה לך ונספר תהלתך על חיינו המסורים בידך ועל נפלאותיך וטובתיך שבכל עת ערב ובקר וצהרים הטוב כי לא כלו רחמיך (ברכת מודים בשמונה עשרה)

At the same time that we witnessed the severe מדת הדין Hashem we saw his benevolent מדת הרחמים have surfaced of lives miraculously saved in the midst of devastation and destruction and of people scheduled to be in mortal danger who due to various circumstances were elsewhere when the tsunami struck.

The OU's *Mashgichim* Rabbi Yosef Chaim Kantor in Thailand,



Public notice board

Rabbi Mordechai Grunberg who visits India and Indonesia, Rabbi Chanan Brand who visits Thailand, Rabbi Haim Talmid who visits Indonesia, Rabbi Yossi Tirnauer who visits India and Sri Lanka and Rabbi Schmueel Lazer Stern who visits Malaysia and Thailand were all *Bs'd* not in harm's way during their RFR rotation of visitations. Rabbi Gavriel Price, from OU headquarters, was in Eretz Yisroel when the tsunami struck. He had just conducted an Initial Inspection in South East India at a plant very close to where the tsunami hit Indian soil. For all of the above – נודה לך ונספר תהלתך:

ונקדשתי בתוך בני ישראל (ויקרא ב', ל"ב)

The incredible relief work of our RFR in Thailand, Rabbi Yosef Chaim Kantor, and the Chabad of Thailand is a tremendous ongoing *Kiddush Hashem*.

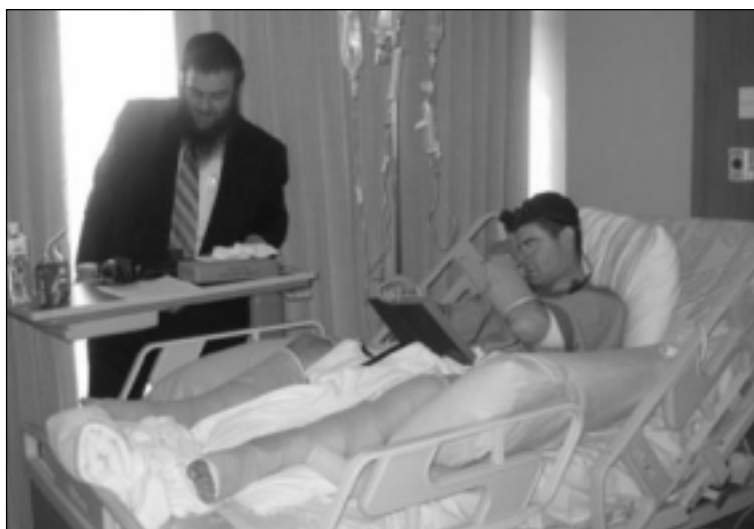
In a recent letter Rabbi Kantor describes the relief work and his feelings in the aftermath of the tsunami.

"My colleagues and I witnessed the unspeakable horror of little bodies mangled beyond recognition, felt the indescribable joy when someone presumed missing was discovered alive elsewhere, and experienced the tenuous irony of families' relief when a brother or sister or child turned up "only" badly injured. Days later, incongruously, we were part of the "excitement" every time a body was positively identified..."

Throughout all this, the light of a world united in its effort to alleviate the plight of the victims shone brightly. We cannot possibly calculate how many calls and emails have come our way. Some offered their manpower services, others asked how to care for the children, and...sent money to be put to immediate use.

During this trying period Chabad of Thailand focused its efforts in large part on the search and recovery effort — compiling and updating lists of the missing, flying down *Zaka* to identify bodies, preparing bodies for burial, securing authorities' compliance for Jewish bodies to be handled in a manner prescribed by Jewish law, and much more.

Our dedicated staff also worked tirelessly to deliver food, lodging and emotional support to the survivors of this horrendous event. We visited the hospitalized, created and sent off food packages for survivors and aid workers on the ravaged islands, and alerted and facilitated thousands of travelers to get in touch with their families via our free internet cafes and complimentary long distance calling facilities.



Rabbi Yosef Chaim Kantor dons tefillin with a survivor.

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HFCS

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used we presume that the alcohol or vinegar is corn-based. In Europe, where wheat is used for these products on a large scale, the OU presumes that these products are *chametz*-based). The potential value of high fructose corn syrup, compared to standard corn syrup was easily grasped: a recipe that required a fixed amount of corn syrup to sweeten a food could afford to use less corn syrup without sacrificing any sweetness.

But by far the more profound ramification of the new existence of high fructose corn syrup was its impact on the sugar industry. A reference to what those in the sweeteners business call the sweetness scale underlines the point:

Relative Sweetness Scale - Sucrose = 100	
Compound	Rating
Sucrose	100
Fructose	140
High Fructose Corn Syrup	120-160
Glucose	70-80
Galactose	35
Maltose	30-50
Lactose	20

Refined, or table sugar (also called cane or beet sugar), the sugar that has probably been the biggest trade commodity in the history of the world, the sugar that we add to our tea and coffee, is sucrose. Sucrose is 100 on the sweetness scale and glucose is 70-80. Glucose corn syrup was never a serious rival to refined sugar in the sweeteners industry because it is not as sweet. But when the glucose in corn syrup is converted to fructose, corn syrup can be sweeter than sugar, depending on how much of the glucose is actually converted to fructose. The two standard high fructose corn syrups sold today are 42% high fructose corn syrup and 55% high fructose corn syrup. 42%, which refers to the percentage of glucose converted to fructose, is about as sweet as sucrose, or liquid sugar; 55% high fructose corn syrup is sweeter than liquid sugar. And in the U.S., where corn is plentiful, corn syrup is not expensive to produce. High fructose corn syrup was as sweet, if not sweeter than sugar, and cheap to make.

When, therefore, high fructose corn syrup began to be produced on an industrial scale in the 1970's, high fructose corn syrup rapidly swallowed up much of the sweeteners market. A Time Magazine article in 1977 described the stupefaction of sugar producers when, in part due to the emergence of high fructose corn syrup, they began to notice that the annual consumption of sugar was falling. "It was like telling them," the author noted, "that people were breathing less air." According to a 1997 USDA report, in 1970 sucrose accounted for about 83% of sweeteners Americans ate, but by 1997 sucrose was only about 43%. High fructose corn

syrup made up virtually the rest, or about 56% of the sweeteners that Americans consumed in 1997.

On a recent trip to a gigantic corn sweeteners plant in Iowa a *mashgiach* and I watched as tens of acres worth of corn was being converted every hour to corn sweetener. According to some rough calculations, which I at first thought must be mistaken but in fact is probably close to the truth, it seems that this plant produces every day enough high fructose corn syrup to sweeten 30 million cans of soda. And this was only one of more than a dozen corn sweetener plants that operate around the country.

Of course, this is not the kind of thing we were thinking about while we were at the plant. Our minds were focused on the *kashrus* of the high fructose corn syrup that we were being asked to review, and which may be going into the soda pop that many of us are drinking. Since corn is inherently kosher, our focus wasn't on that. It was on the enzymes, glucose-isomerase as well as some others, used in the process.

Although in general enzymes can come from various sources (the rennet enzyme used to curdle milk is a well-known example of one that comes from animal), enzymes produced for the corn sweeteners industry are produced by a biochemical process called microbial fermentation. In such a production specifically selected (and sometimes genetically programmed) microorganisms, which are microscopic organisms that are not identifiable to the naked eye, are given a diverse diet of proteins, minerals, and other goodies in order to help them grow and grow. When the company is satisfied they have been sufficiently propagated, the microorganisms are pumped to four or five story stainless steel tanks (almost everything in industrial food production is done on a huge scale) and fed a carbohydrate-based feedstock. The carbohydrate is usually a potato, wheat, or corn-based sugar. The bacteria's conversion of the feedstock yields, miraculously, an enzyme.

Kashrus organizations see to it that the ingredients, including those in the preliminary diet of the organisms are kosher. The main feedstock also must, of course, be kosher. While there is potential for some problems in microbial fermentation production – use of a milk sugar, for example, instead of a carbohydrate sugar as a feedstock — by and large the commercial production of enzymes for the sweeteners industry is limited and comports easily with kosher law. Glucose-isomerase in particular is a highly specialized and expensive production process and there are not many companies that produce it. As far as we know there is no company that produces it that is not kosher certified and *pareve*. And so, while the likelihood that a *mashgiach* will find any surprises in a high fructose corn syrup facility is low, he nevertheless makes it his duty to inspect that all of the enzymes are in order.

KASHRUTH alert!

MRS. BUTTERWORTH'S ORIGINAL PANCAKES (Foodservice 144 count) produced by Aurora Foods Inc., St. Louis, MO is certified OU^D , but the dairy designation was inadvertently omitted. Future packaging will be revised.

SWISS GOLD SWISS PREMIUM DARK CHOCOLATE produced by Galaxy Imports, Inc., Hillcrest, NY is certified as OU^D but the dairy designation has been inadvertently omitted. Future packaging will be revised. Consumers spotting this product are requested to contact the Orthodox Union at 212-613-8148 or via email at kshalerts@ou.org.

CAFÉ GAVINA Mocha Granita Mix, French Vanilla Granita Mix, Strawberry Crème Granita Mix, Original Cappuccino Mix, Hot Chocolate Mix, Mocha Cappuccino Mix, French Vanilla Cappuccino Mix, English Toffee Cappuccino Mix, Cinnamon Mocha Cappuccino Mix, Vanilla Chai Mix, and Spiced Chai Mix produced by F. Gavina & Sons, Inc., Vernon, CA bear an OU and contain dairy ingredients (which are listed on the ingredient panel). The requisite "D" designation was inadvertently omitted. The error has been corrected.

PRICE CHOPPER FUDGE FLUFFS COOKIES produced by The Price Chopper, Inc. Schenectady, NY and which is distributed in Price Chopper stores, mistakenly bears an unauthorized OU^D symbol and is not certified as Kosher by the Orthodox Union. Product has been withdrawn from the marketplace.

TSUNAMI

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In addition to our Thailand efforts, Rabbi Gavriel Holtzberg of Chabad in Bombay traveled to the Andaman Islands where he helped the young Jews vacationing there to get in touch with their families after miraculously escaping death and even injury by the deadly tsunami.

As I write, our three Chabad Houses are still flooded with thousands of young travelers, some still recovering from the shock, keeping our rabbis and rebbetzins busy from early morning till early morning. (These travelers have benefited from our regular activities, which includes hosting some 1,000 persons every Shabbat and creating thousands of Kosher meals weekly.)

We are now focusing our efforts on delivering aid directly to the hardest-hit victims.

Two of us flew down to Krabi and met with aid workers, helped update the rolls of the missing, and met with groups of locals — and heard and saw their heart-rending stories of devastation.

We met with the country's Minister of Agriculture and gave the mayor of Kao Lak (considered to be the hardest hit city in the country) funds for rebuilding.

We just completed the purchase of a refrigerated truck which will assist us greatly in our efforts to gather and deliver food.

We are working with home improvement stores to create a voucher system to pass on to villagers in order to improve on whatever basic housing they receive — to help transform whatever will be built for them into a home truly their own.

Two of our rabbinical students are setting up a center for long-term relief on Phuket.



Loading food cartons for survivors.

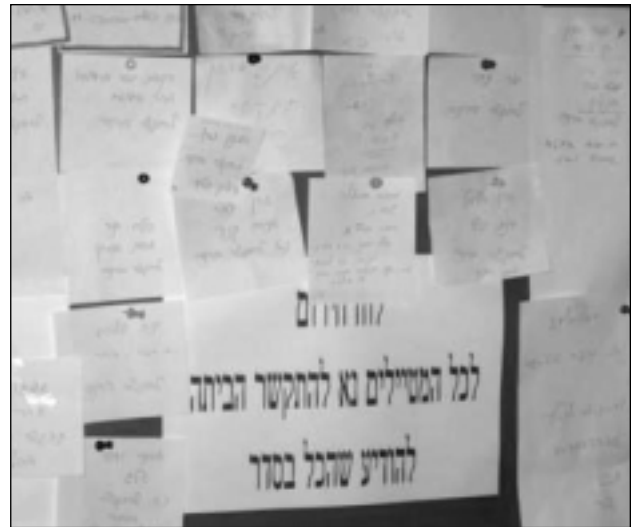
For me personally, one of the most heartrending things to see during my visit were the thousands of battered toys strewn throughout the devastation.

When I then saw groups of kids walking around dazed with nothing to do I made a steadfast resolution:

With G-d's help, we are starting a toy drive for the children..."

מי איבא מידי... דלא רמזי באורייתא (תענית דף ט.)

A possible future for the tsunami and its utter devastation is found in רמיה נ"א, ל"ט-מ"ג



Notice board

וישנו שנת עולם ולא יקוצו נאם יקוי"ק (צונאמי) and sleep a perpetual sleep and not be awoken says Hashem.

עלה על בבל הים בהמון גליו נכסתה – The sea has ascended upon Baval; with the multitude of its waves it has been covered.

היו עריה לשמה ארץ ציה וערבה – Her cities become desolate – a dry land and a desert.

May we merit to witness the day when we will clearly understand the ways of Hashem in the words of the Navi Yeshayah

כי מלאה הארץ דעה את ה'
כמים לים מכסים!

Breyer's Yogurt

is being reformulated as non kosher.
For a period of time, both versions will
be available simultaneously.

The reformulated product does not bear the ©,
contains gelatin, and bears different graphics stating
"Better Tasting, Smoother and Creamier".
The older version, bearing the ©, will still be available
and is in fact certified when bearing the ©.

Consumers should always check products at the time
of purchase to verify the presence of a kosher symbol.

MAZAL TOV TO ...

RABBI AND MRS. HERSCHEL SCHACHTER on the engagement of their children. Their son "Yummy" (Yisroel Moshe) to Shoshana Kuhl of Toronto, Canada and their daughter Shevi to Eli Rosner of Brooklyn, NY.

our devoted RFR in Orlando, FL **RABBI SHALOM BER DUBOV AND HIS WIFE** on the birth and Bris of their son, Simcha.

our dedicated RFR in Phoenix, AZ **RABBI SHLOIME GELBER AND HIS WIFE** on the birth and Bris of their son, Meir.