THE HAIN CELESTIAL GROUP

Boulder Offices
4600 Sleepytime Drive • Boulder, CO 80301-3292 • phone: (303) 530-5300 • www.hain-celestial.com

September 26, 2006

National Organic Standards Board
c/o Robert Pooler,
Agricultural Marketing Specialist
USDA/AMS/TM/NOP
Room 4008-So., Ag Stop 0268
P.O. Box 96456
Washington, D.C. 20090-6456

Dear Mr. Pooler,

Please accept our petition for I.Q.F. Diced Roasted Poblano Pepper to be added to National List Section 205.606 for review by the National Organic Program (NOP) and the National Organic Standards Board (NOSB). Enclosed are two copies each of two versions, one with Confidential Business Information included and one with Confidential Business Information deleted.

The petition has been completed incorporating a compilation of the best available instructional information and guidance at the time, using the NOP instructions for filing a petition published in the Federal Register, July 13, 2000, additional information as provided by NOP in the Federal Register notice of June 7, 2006, as well as insightful advice from NOP accredited certifiers and the Organic Trade Association.

We are aware that the NOSB Handling Committee has placed a recommendation regarding Commercial Availability as it applies to National List Section 205.606 on the agenda for the upcoming meeting in Arlington, VA in October. Should this recommendation be approved by the full NOSB and adopted by NOP, we will be glad to provide any additional information required that is not already included in this petition.

Thank you for your consideration and please do not hesitate to contact us with any questions of content or completeness.

Sincerely,

James A. Kinsinger

James A. Kinsinger, Ph.D.
Corporate Director of Regulatory Compliance
The Hain Celestial Group, Inc.

CBI Deleted Version

Petition to the National Organic Program and National Organic Standards Board for I.Q.F. Diced Roasted Poblano Pepper to be Added to National List Section 205.606

Item A

This is a petition to amend the National List Section 205.606 to include I.Q.F. Diced Roasted Poblano Pepper as a nonorganically produced agricultural product allowed as an ingredient in or on processed products labeled as organic.

Item B

1. **Common Name**: I.Q.F. (Individually Quick Frozen) Diced Roasted Poblano Pepper

   Botanical/Latin Name: Capsicum Annuum

   Other Names: George Chiala Farms Product Code #C-31-PGTD33-Julian Date (Plant C-IQF--Poblano-Green-Roasted-Diced-3/8"x3/8"-Date)

2. **Manufacturers' Name, Address and Telephone**

   George Chiala Farms, Inc.
   15500 Hill Road
   Morgan Hill, CA 95037

   Contact: George Chiala, Jr.
   Email: george.jr@gcfarms-inc.com
   Phone: 408-778-0562

3. **The intended or current use of the substance**

I.Q.F. Diced Roasted Poblano Pepper is only used in Hain Celestial Imagine ™ Organic Corn Chipotle Bisque. It is possible that we may plan to use it in other products in the future. Organic Corn Chipotle Bisque is a new product and is being well accepted by our customers and the consumer. As demand and popularity of roasted peppers continues to increase the likelihood of other products to follow increases as well. The ingredient is used exclusively for its flavor. This soup also contains chipotle pepper for a smoky note. Chipotle is used in the product name because it is a widely recognized ingredient, growing in popularity. To achieve the distinctive flavor of the soup, the Roasted Poblano

CBI Deleted

Pepper is a very important ingredient because it imparts its unique flavor with a mild heat and fruity pepper notes. No other roasted pepper has the same flavor.

4. A list of the crop, livestock or handling activities for which the substance will be used. If used for handling (including processing), the substance's mode of action must be described.

The only handling activity of I.Q.F. Diced Roasted Poblano Pepper is as an ingredient in Hain Celestial Imagine ™ Organic Corn Chipotle Bisque.

CBI Deleted

Mode of Action

CBI Deleted

The finished product, Hain Celestial Imagine ™ Organic Corn Chipotle Bisque, is packaged in 32 ounce aseptic containers. The distinctive flavor of Roasted Poblano Pepper provides a spicy bite that is unique only to Roasted Poblano Pepper and the flavor is maintained in the process of producing Hain Celestial Imagine ™ Organic Corn Chipotle Bisque.

5. The source of the substance and a detailed description of its manufacturing or processing procedures from the basic component(s) to the final product.

Roasted Poblano Peppers are dark green, black flecked roasted large chile peppers. They have a fresh pepper aroma with some roasted notes. There are no off-odors associated with Poblano peppers. I.Q.F. Diced Roasted Poblano Pepper is an individually quick frozen product.

Summary of Processing

CBI Deleted

Fresh green Poblano peppers are roasted in a specially designed roaster, then washed, diced, individually quick frozen and then held at a temperature necessary for preservation as frozen.

CBI Deleted

Chiala Farms Certificate of Analysis is attached.

6. <u>A summary of any available previous reviews by State or private certification programs or other organizations of the petitioned substance.</u>

No previous reviews have been conducted to approve the use of I.Q.F. Diced Roasted Poblano Pepper as a nonorganically produced agricultural product allowed as an ingredient in or on processed products labeled as organic. Until the publication in the Federal Register, June 7, 2006, of the National Organic Program Final Rule addressing the Court Order following case of Harvey vs. Johanns, there was no such clarification that each nonorganically produced agricultural product was required to be listed in §205.606 of the National List.

The Summary of the NOP Final Rule of June 7, 2006 states:

"Further, this final rule revises the NOP regulations to clarify that only nonorganically produced agricultural products listed in the NOP regulations may be used as ingredients in or on processed products labeled as "organic." In accordance with the final judgment in Harvey, the revision emphasizes that only the nonorganically produced agricultural ingredients listed in the NOP regulations can be used in accordance with any specified restrictions and when the product is not commercially available in organic form."

In addition, the NOP Final Rule revises National List §205.606 to read:

"§205.606 Nonorganically produced agricultural products allowed as ingredients in or on processed products labeled as organic.

Only the following nonorganically produced agricultural products may be used as ingredients in or on processed products labeled as "organic," only in accordance with any restrictions specified in this section, and only when the product is not commercially available in organic form.
(a) Cornstarch (native)
(b) Gums—water extracted only (arabic, guar, locust bean, carob bean)
(c) Kelp—for use only as a thickener and dietary supplement
(d) Lecithin—unbleached
(e) Pectin (high-methoxy)"

This petition is in response to the revision of National List §205.606 to approve I.Q.F. Diced Roasted Poblano Pepper as a nonorganically produced agricultural product allowed as an ingredient in or on processed products labeled as organic.

In consideration of the regulatory history and justification for the use of I.Q.F. Diced Roasted Poblano Pepper neither California Certified Organic Farmers, Oregon Tilth, Quality Assurance International, nor the California Organic Program have ever conducted reviews of I.Q.F. Diced Roasted Poblano Pepper. QAI did approve the use of the conventional form by Hain Celestial of this product as an organic form was not proven to be commercially available organically.

7. <u>Information regarding EPA, FDA, and State regulatory authority registrations, including registration numbers.</u>

This product conforms in every aspect to the requirements mandated by the Federal Food Drug and Cosmetic Act as well as State Regulations and Amendments. It is processed, packed and sold in compliance with California's Proposition 65 (CA Health and Safety Code 25249.5-25249.13) and Regulations.

The product is packed in accordance with current Good Manufacturing Practices as defined in 21CFR, §110, Subparts A-G. Text of this section is attached.

No registration numbers are required for Poblano peppers in either fresh or frozen form.

8. The Chemical Abstract Service (CAS) number or other product numbers of the substance and labels of products that contains the petitioned substance.

The product number for I.Q.F. Diced Roasted Poblano Pepper produced by George Chiala Farms is identified by Product Code #C-31-PGTD33-Julian Date. There is no other identifying number or CAS number for I.Q.F. Diced Roasted Poblano Pepper.

Please note product labels as attachments.

9. The substance's physical properties and chemical mode of action.

Chile Poblano

Roasted Poblano peppers are charred, sometimes peeled and appear dark green and black flecked. They have a fresh pepper aroma with some roasted notes. There are no off-odors associated with Poblano peppers.

This chile is a pod type of the annuum species. The name Ancho means 'wide,' an allusion to the broad, flat, heart-shaped pods in the dried form. The fresh pod is called Poblano.

The Plant

Anchos (Poblanos) are multiple-stemmed and compact to semi-erect, semi-woody, and about 25 inches high. The leaves are dark green and shiny, approximately 4 inches long and 2-1/2 inches wide, and the corollas are off-white and appear at every node. The flowering period begins 50 days after sowing and continues until the first frost. The pods are pendant, vary between 3 to 6 inches long, and 2 to 3 inches wide, are conical or truncated and have indented shoulders. Immature pods are dark green, maturing to either red or brown, and the dried pods are a very dark reddish-brown, nearly black. They are fairly mild, ranging from 1,000 to 1,500 Scoville Units.

Agriculture

This variety is one of the most popular peppers grown in Mexico, where about 37,000 acres of it are under cultivation. The Ancho/Poblano varieties grow well in the U.S. but only about 150 acres are planted. Growers in the eastern U.S. reported their plants grown in Wharton, New Jersey, topped four feet and needed to be staked to keep them from toppling over. These plants produced well, but the pods never matured to the red stage before the end of the growing season. The usual growing period is 100 to 120 days and the yield is about fifteen pods per plant, although there are reports of up to thirty pods per plant.

Culinary Usage

Fresh Poblanos are roasted and peeled, then preserved by canning or freezing. They are often stuffed to make chiles rellenos. The dried pods can be stored in airtight containers for months, or they can be ground into a powder. Anchos are commonly used in sauces called moles.
(www.fieryfoods.com)

The Poblano is pronounced: puh blah noe. Poblano peppers are mild, heart-shaped peppers that are large and have very thick walls, which make them great for stuffing. Chile rellenos are often made with Poblano peppers. Poblanos are usually roasted and peeled before use. Poblano chiles, when dried, are called Ancho or Mulato chiles.
(http://phoenix.about.com/od/foodanddrink/ss/chilepepper_2.htm)

The Poblano rates between 1,000 and 2,000 Scoville units on the heat index. How high a chile pepper scores on the heat scale is determined by high-performance liquid chromatography measurement of how many parts per million of capsaicin it contains. (Capsaicin is the compound that gives chile peppers their fiery bite.) This figure is then converted into the historic Scoville heat units that signify how much dilution is necessary to drown out the chile's heat. The heat level of a chile is given as a range because it varies with how and where the pepper was cultivated.
(www.deliciouslivingmagazine.com)

The Poblano is a beautiful dark green almost black chile. Large and luscious the Poblano is one of the most popular chiles used in Mexican cuisine. The typical Poblano is at least 4" to 5" long. In California these chiles are called Pasilla. This is not a chile to eat raw but use it roasted, cut into rajas (strips), in sauces or stews. When dried the Poblano is called an Ancho or Mulato chile.
(www.gourmetsleuth.com)

The shiny-skinned, blackish-green Poblano is subtly sweet and just a little bit spicy, like a cross between a bell pepper and a jalapeño.
(www.foodandwine.com)

A dark (sometimes almost black) green chile with a rich flavor that varies from mild to snappy. The darkest Poblanos have the richest flavor. This chile is about 2 1/2 to 3 inches wide and 4 to 5 inches long, tapering from top to bottom in a triangular shape. The very best Poblanos are found in central Mexico, though

they are now also grown in the U.S. Southwest. Fresh Poblanos can be found in Mexican markets and in many supermarkets. Their peak season is summer and early fall. They're also available canned. Ripe Poblanos turn a reddish-brown color and are sweeter than the green. In their dried state they're known as Ancho or Mulato chiles. Poblanos can be used in a variety of dishes, but are perhaps best known as the chile of choice for chiles rellenos.

Copyright (c) 1995 by Barron's Educational Series, from The New Food Lover's Companion, Second Edition, by Sharon Tyler Herbst
(www.foodnetwork.com)

The Poblano is a mild chile pepper, just slightly more spicy than a bell pepper . One of the most popular peppers grown in Mexico, the plant (of the "annuum" species) is multi-stemmed, and can reach 25 inches in height. The pod itself is about three to six inches long, and about two to three inches wide. An immature Poblano is dark green in color, but eventually turns a red so dark as to be nearly black. It can be prepared a number of ways, commonly including: dried, breaded and fried, stuffed, or in sauces called moles. After being roasted and peeled, it can be preserved by either canning or freezing. Storing Poblanos in airtight containers will also suffice for several months. When dried, this pepper becomes a broad, flat, heart-shaped pod called an Ancho chile, often ground into a powder used for flavoring recipes.
(www.wikipedia.com)

I.Q.F. Diced Roasted Poblano Pepper is an individually quick frozen product. Fresh green Poblano peppers are washed, roasted, then diced, individually quick frozen and then held at a temperature necessary for preservation.

Nutritional Highlights

Poblano pepper (raw), 1/2 cup (75g)
Calories: 15
Protein: 0.7g
Carbohydrate: 3.5g
Total Fat: 0.1g
Fiber: 0.6g
(www.deliciouslivingmagazine.com)

a) Chemical interactions with other substances, especially substances used in organic production

There are no chemical interactions with other substances used in organic production of the finished product in which I.Q.F. Diced Roasted Poblano Pepper is an ingredient.

b) Toxicity and environmental persistence

CBI Deleted

There is no evidence of toxicity or environmental persistence from the production of I.Q.F. Diced Roasted Poblano Pepper.

c) Environmental impacts from its use or manufacture

There are no environmental impacts from the roasting or freezing of I.Q.F. Diced Roasted Poblano Pepper.

CBI Deleted

d) Effects on human health

There is no evidence of any effect on human health from the production of I.Q.F. Diced Roasted Poblano Pepper.

While some individuals experience allergic reaction to the family of nightshades, of which Poblano peppers belong, there is no requirement that products including I.Q.F. Diced Roasted Poblano Pepper as an ingredient carry any warning label.

Please see link to http://www.cfsan.fda.gov/~dms/alrguid3.html, FDA's Questions and Answers Regarding Food Allergens, including the Food Allergen Labeling and Consumer Protection Act of 2004, Edition 3, Final Guidance, which discusses the foods and food groups that must be identified as potential allergens on consumer product labels. Poblanos, peppers, chilies, or nightshades are not included as known allergens.

Also attached is an article from Allergy Magazine, July 2005 that goes into detail about nightshade sensitivity and how it may be avoided.

e) Effects on soil organisms, crops, or livestock

There is no evidence of any effect on soil organisms, crops or livestock from the production of I.Q.F. Diced Roasted Poblano Pepper.

10. Safety information about the substance including a Material Safety Data Sheet (MSDS) and a substance report from the National Institute of Environmental Health Studies.

While some varieties of chilies are described by MSDS documents, and while Poblano is considered a "hot" pepper, an MSDS is not on record or according to best available information, has never been documented. MSDS documents exist for pepper flavors, pepper sprays, and hot sauces, but not for I.Q.F. Diced Roasted Poblano Pepper.

Regulatory information: EPA/NIEHS/Other Sources

Research has not found the existence of any regulatory information from EPA, NIEHS or other sources not noted in this petition, for I.Q.F. Diced Roasted Poblano Pepper.

11. Research information about the substance, which includes comprehensive substance research reviews and research bibliographies, including reviews and bibliographies, which present contrasting positions to those presented by the petitioner in supporting the substance's inclusion on or removal from the National List.

Research Information

Included as attachments:

On Food and Cooking, The Science and Lore of the Kitchen, by Harold McGee, Revised Edition 2004

Prepared Foods, Development Trends and Technologies for Formulators and Marketers Online
(www.preparedfoods.com)

National Association of Specialty Food Trade (NASFT)
(www.specialtyfood.com)

Proceedings of the 16th International Pepper Conference, Tampico, Tamaulipas, Mexico, November 2002, Effect of Controlled Atmospheres on Quality of Green Pepper Poblano

There is no evidence of research that would present contrasting positions to those presented in this petition.

12. Petition Justification Statement

Hain Celestial's Imagine™ Organic Corn Chipotle Bisque was formulated with a specific flavor profile. The Roasted Poblano Pepper is a vital part of this flavor profile. The product would have a distinctly different flavor without this

ingredient. Our sales would be negatively impacted if the Roasted Poblano Pepper was removed from the formula. This product was introduced in June

CBI Deleted

2006. The soup is delicious, and we anticipate that sales will increase in subsequent years.

The Roasted Poblano peppers are vital to the flavor profile of this organic product. The product has more than 95% organic ingredients, and we use organic ingredients when they are available.

CBI Deleted

CBI Deleted

The California Organic Program was asked if any producers of I.Q.F. Diced Roasted Poblano Pepper are registered with the program. While the program has a data base of all registered agricultural producers in California, many who produce organic Poblano peppers, the program does not track handlers. The California Department of Health Services maintains information about organic processors registered in the state, but they do not track detailed information about individual registrants businesses.

Along with the submission of this petition, Hain Celestial is pro-actively attempting to source I.Q.F. Diced Roasted Poblano Pepper in organic form in quantities sufficient for a supplier to produce it.

We are working with other companies at this time to develop collaborative combined future use projections and with George Chiala Farms to determine the farm's needs to reach minimum orders for them to go into organic production of I.Q.F. Diced Roasted Poblano Pepper.

CBI Deleted

CBI Deleted

Petitioner's Conclusion:

Contributing to the justification of this petition, Hain Celestial considered the possibility of using any other product that may be available organically that might be used in place of I.Q.F. Diced Roasted Poblano Pepper, which we have concluded is in fact not available organically in the quantity we require. During research and development of the finished product that includes I.Q.F. Diced Roasted Poblano Pepper as an ingredient, it was determined that there is no other roasted pepper that has the unique flavor of Poblano.

It is Hain Celestial's intention to use this product in organic form if it is available, or when it becomes available and is currently working towards developing such a source. At some time in the future, when the market demands more substantial quantities of organic I.Q.F. Diced Roasted Poblano Pepper we will be able to join other companies in combined usage amounts to meet the minimums required by potential manufacturers.

As a result of our research, we have concluded that there are no current suppliers of I.Q.F. Diced Roasted Poblano Pepper willing to produce the product organically in the quantity Hain Celestial requires for production.

Having done diligent industry exploration, it is our determination that I.Q.F. Diced Roasted Poblano Pepper is not commercially available in organic form in the minimal quantity necessary for our production requirements.

13. **Commercial Confidential Information Statement:**

CBI Deleted

CBI Deleted

Petition to the National Organic Program and National Organic Standards Board for I.Q.F. Diced Roasted Poblano Pepper to be Added to National List Section 205.606

List of Attachments

Product Label
Hain Celestial Imagine ™ Organic Corn Chipotle Bisque Label

CBI Deleted

Article
www.specialtyfood.com/do/news/ViewNewsArticle?id=1482
National Association of Specialty Food Trades online magazine SpecialtyFood.com, Products, Trends and Your Business in Perspective, June 30, 2004, "What is the current "flavor of the moment" with your customers?", by Jennifer Maslow

Article
"More Things Change", Prepared Foods Marketwatch, published by Prepared Foods, Development Trends and Technologies for Formulators and Marketers, August 11, 2006

Article
"Flavors in the Limelight", published by Prepared Foods, Development Trends and Technologies for Formulators and Marketers, May 1, 2005, by Marcia A. wade, Technical Editor

Article
www.allergymagazine.com
Allergy Magazine
Site under construction. To be provided upon request at a later date.

Article
www.fiery-foods.com/dave/ancho.html
FieryFoods.com
Pepper Profile: Ancho/Poblano

Technical Review
Proceedings of the 16th International Pepper Conference, Tampico, Tamaulipas, Mexico, November 2002, Effect of Controlled Atmospheres on Quality of Green Pepper Poblano

Report
Culinary Trend Mapping Report, Summer 2004: Quarterly Journal of Food and Ingredients Insight, published by Packaged Facts, August 1, 2004, 108 pages
Overview of Journal content, Classification of Culinary Trends by Stage – Where are they now? Stage 3

Link
www.cfsan.fda.gov/~dms/alrguid3.html
USDA/FDA Center for Food Safety and Applied Nutrition
Guidance for Industry
Questions and Answers Regarding Food Allergens, Including the Food Allergen Labeling and Consumer Protection Act of 2004 (Edition 3)
Final Guidance

Link
www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfCFR/CFRSearch.cfm
Link to 21 CFR §110
Title 21 - Foods and Drugs
Chapter I - Food and Drug Administration
Department of Health and Human Services
Subchapter B - Food for Human Consumption
Part 110 - Current Good Manufacturing Practice in Manufacturing, Packing, or Holding Human Food

Excerpt
On Food and Cooking, The Science and Lore of the Kitchen, by Harold McGee, Revised Edition 2004
Pages 418-421, "A Survey of Temperate Climate Spices - *Chillis*"
Please not :
Attached with the permission of the author. The author requests that the copyright notice be included in any internet publication.

EVALUATION CRITERIA FOR SUBSTANCES ADDED TO THE NATIONAL LIST

Category 1. Adverse impacts on humans or the environment? Substance: I.Q.F. Diced Roasted Poblano Pepper

Question	Yes	No	N/A[1]	Documentation (TAP; petition; regulatory agency; other)
1. Are there adverse effects on environment from manufacture, use, or disposal? [§205.600 b.2]		√		
2. Is there environmental contamination during manufacture, use, misuse, or disposal? [§6518 m.3]		√		
3. Is the substance harmful to the environment? [§6517c(1)(A)(i);6517(c)(2)(A)i]		√		
4. Does the substance contain List 1, 2, or 3 inerts? [§6517 c (1)(B)(ii); 205.601(m)2]			√	
5. Is there potential for detrimental chemical interaction with other materials used? [§6518 m.1]		√		
6. Are there adverse biological and chemical interactions in agro-ecosystem? [§6518 m.5]		√		
7. Are there detrimental physiological effects on soil organisms, crops, or livestock? [§6518 m.5]		√		
8. Is there a toxic or other adverse action of the material or its breakdown products? [§6518 m.2]		√		
9. Is there undesirable persistence or concentration of the material or breakdown products in environment?[§6518 m.2]		√		
10. Is there any harmful effect on human health? [§6517 c (1)(A)(i) ; 6517 c(2)(A)i; §6518 m.4]		√		
11. Is there an adverse effect on human health as defined by applicable Federal regulations? [205.600 b.3]		√		
12. Is the substance GRAS when used according to FDA's good manufacturing practices? [§205.600 b.5]			√	
13. Does the substance contain residues of heavy metals or other contaminants in excess of FDA tolerances? [§205.600 b.5]		√		

[1]If the substance under review is for crops or livestock production, all of the questions from 205.600 (b) are N/A—not applicable.

Category 2. Is the Substance Essential for Organic Production? Substance: I.Q.F. Diced Roasted Poblano Pepper

Question	Yes	No	N/A[1]	Documentation (TAP; petition; regulatory agency; other)
1. Is the substance formulated or manufactured by a chemical process? [6502 (21)]		√		
2. Is the substance formulated or manufactured by a process that chemically changes a substance extracted from naturally occurring plant, animal, or mineral, sources? [6502 (21)]		√		
3. Is the substance created by naturally occurring biological processes? [6502 (21)]		√		
4. Is there a natural source of the substance? [§205.600 b.1]	√			
5. Is there an organic substitute? [§205.600 b.1]		√		
6. Is the substance essential for handling of organically produced agricultural products? [§205.600 b.6]	√			I.Q.F. Diced Roasted Poblano Pepper is essential for Hain Celestial Imagine ™ Organic Corn Chipotle Soup
7. Is there a wholly natural substitute product? [§6517 c (1)(A)(ii)]			√	I.Q.F. Diced Roasted Poblano Pepper is a natural product.
8. Is the substance used in handling, not synthetic, but not organically produced? [§6517 c (1)(B)(iii)]	√			I.Q.F. Diced Roasted Poblano Pepper has not been found in organic form in the quantity required.
9. Is there any alternative substances? [§6518 m.6]		√		
10. Is there another practice that would make the substance unnecessary? [§6518 m.6]		√		

[1]If the substance under review is for crops or livestock production, all of the questions from 205.600 (b)are N/A—not applicable.

Category 3. Is the substance compatible with organic production practices?

Substance: I.Q.F. Diced Roasted Poblano Pepper

Question	Yes	No	N/A[1]	Documentation (TAP; petition; regulatory agency; other)
1. Is the substance compatible with organic handling? [§205.600 b.2]	√			
2. Is the substance consistent with organic farming and handling? [§6517 c (1)(A)(iii); 6517 c (2)(A)(ii)]	√			
3. Is the substance compatible with a system of sustainable agriculture? [§6518 m.7]	√			
4. Is the nutritional quality of the food maintained with the substance? [§205.600 b.3]	√			
5. Is the primary use as a preservative? [§205.600 b.4]		√		
6. Is the primary use to recreate or improve flavors, colors, textures, or nutritive values lost in processing (except when required by law, e.g., vitamin D in milk)? [205.600 b.4]		√		
7. Is the substance used in production, and does it contain an active synthetic ingredient in the following categories: a. copper and sulfur compounds;		√		
b. toxins derived from bacteria;		√		
c. pheromones, soaps, horticultural oils, fish emulsions, treated seed, vitamins and minerals?		√		
d. livestock parasiticides and medicines?		√		
e. production aids including netting, tree wraps and seals, insect traps, sticky barriers, row covers, and equipment cleaners?		√		

[1]If the substance under review is for crops or livestock production, all of the questions from 205.600 (b) are N/A—not applicable.

CARTONS ONLY

ORGANIC CORN CHIPOTLE
Shake Well. This Container is Not Microwave Safe.

Imagine Bistro™

ORGANIC CORN CHIPOTLE BISQUE

NEW!

USDA ORGANIC

32 FL OZ (1 QT) 946mL SERVING SUGGESTION

ORGANIC CORN CHIPOTLE

Imagine® brings organic creamy soups to a gourmet level with Imagine Bistro Organic Bisques! We start with premium organic vegetables. And now you can actually see the distinctive herbs and spices in this delectable puree. Get ready for the intense flavors of Corn Chipotle Bisque. It's a culinary medley of corn, onion, roasted poblano peppers, cilantro, roasted garlic and potato. The hearty texture highlights the robust taste in every bite. As always, we've maintained our high quality standards in delivering Imagine Bistro Organic Bisques fresh to your table.

0 84253 24006 2

X2409-000

Ingredients: Filtered water, organic corn, organic potatoes, organic onions, roasted green poblano peppers, organic cane juice, sea salt, organic fire roasted garlic, organic spices, organic expeller pressed oil (canola and/or safflower and/or sunflower), chipotle peppers.

Nutrition Facts

Serving Size 1 Cup (240mL)
Servings Per Container About 4

Amount Per Serving	
Calories 100 Calories from Fat 10	
	% Daily Value*
Total Fat 1g	2%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 590mg	25%
Total Carb 22g	7%
Dietary Fiber 2g	8%
Sugars 5g	
Protein 3g	

Vitamin A 4% • Vitamin C 40%
Calcium 2% • Iron 4%

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

MANUFACTURED FOR DISTRIBUTION BY:
THE HAIN CELESTIAL GROUP, INC.
MELVILLE, NY 11747 USA
Certified Organic by Quality Assurance International
COMMENTS? Please send UPC and Manufactured Code Date along with your comments to:
IMAGINE FOODS CONSUMER AFFAIRS
4600 Sleepytime Drive, Boulder, CO 80301
or call 800-434-4246 www.imaginefoods.com

PRODUCT OF CANADA

Organic
Restaurant Style
Non Dairy & No MSG
No Artificial Ingredients
Preservative-Free
We only use the finest organic ingredients.

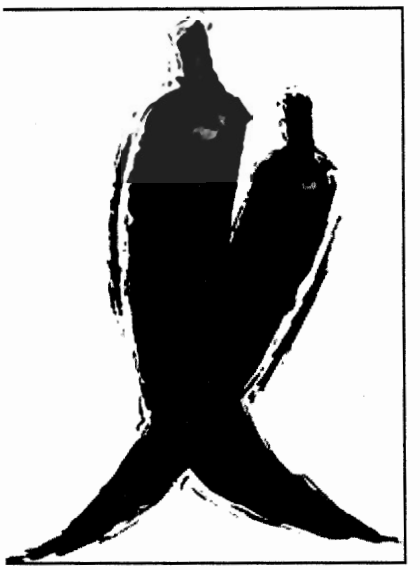
- Organic Cuban Black Bean Bisque
- Organic Fire Roasted Tomato Bisque
- Organic Creamy Butternut Squash
- Organic Creamy Tomato
- Organic Creamy Sweet Corn
- Organic Creamy Broccoli
- Organic Sweet Potato
- All Natural Lobster Bisque
- All Natural Crab Bisque
- Organic Low Sodium Chicken Broth
- Organic Low Sodium Vegetable Broth
- Organic Chicken Stock
- Organic Vegetable Stock
- Organic Beef Flavored Stock

Free recipes
Visit **www.imaginefoods.com** for other exciting recipes, and to learn more about the full line of Imagine gourmet organic soups and broths.

Imagine

SPECIALTY FOOD
PRODUCTS, TRENDS & YOUR BUSINESS IN PERSPECTIVE MAGAZINE

What is the current "flavor of the moment" with your customers?



By Jennifer Maslow

A: I'm noticing a trend toward hot and spicy flavors. Hot sauces—especially the red chile varieties—are selling well, and everything with chipotle is popular. We sell chipotle salsas as well as an olive blend flavored with chipotles that has become a favorite.

I'm also noticing an increase in sales of specialty chocolate bars infused with exotic flavor combinations such as ginger, wasabi, mint or rosemary. Esoteric combinations are also gaining popularity in our artisanal cheese department. Cranberry-studded goat cheese is a hot item, as is one of our special offerings—goat cheese topped with edible flowers.
Denise Brown, Liquor Barn, Lexington, KY

A: Classic vanilla is really popular right now, especially in beverages. We just added a new Vanilla Latté to our café menu because of the high demand for flavored espresso drinks. Vanilla is overwhelmingly the most popular flavor shot.

Cranberry is a hot flavor in baked goods. Cranberry Walnut Scones used to be one of our specials, but, in response to customer requests, we're now offering them everyday. Cranberry Apple Flan, Cranberry Pistachio Biscotti, and Cranberry Apple Pie are all top-selling bakery items.

The most notable savory flavor is definitely chipotle. Customers are interested in chipotle salsas and hot sauces, and they love our chipotle-themed prepared entrées and salads. Popular menu selections include Chipotle Chickpea Salad, Asparagus with Chipotle Aioli, Chipotle Potato Salad, and Chipotle-Rubbed Pork Loin.
Ramsey Brous, Ithaca Bakery, Ithaca, NY

A: Mint is hot. We sell a mint syrup that is popular for use in cocktails such as Mojitos and for flavoring a variety of dishes like flan and fruit salad. Spicy flavors are also big. I'm noticing increased demand for products with ethnic flavors such as poblano and ancho chili powders and chipotles in adobo. Customers have been requesting spicy mango salsas and marinades as well.
Roya Nazare, Gourmet Pantry, Blacksburg, VA

A: Wasabi was the big flavor a couple of years ago, and it is still a great seller. We move a lot of wasabi-flavored condiments including mayos, mustards, and dipping sauces, but one of the hottest flavors with our customers now is fig. Fig cakes, fig balsamic vinegar, and Italian fig preserves all move quickly. The flavor pairs well with cheese—we offer a fig spread to accompany goat cheese—and it goes great with wine. Customers are also using the fig preserves in savory dishes featuring pork.

Interesting flavors are also cropping up in unexpected categories. Our line of flavored Italian pastas is doing quite well. Top sellers include porcini mushroom, saffron, and red chile.
Evelyn Ignatow, Hyde Park Gourmet, Cincinnati

A: Customers are going for chipotle-flavored products in droves. Barbecue sauces, dipping sauces, antipasti, and salsas with chipotle are all popular. Anything with Thai flavors also excites customers. They're interested in creating noodle dishes and stir-fries at home using products featuring some of the flavors of Thai cuisine like chile pepper and orange.

Lemon-lime is a definite flavor of the moment. We're selling a lot of lemon-lime marmalades and cooking sauces, as

well as Margarita-flavored marinades. I think it's an extension of the cocktail-themed trend that has been big for a while. Margarita- and martini-flavored items are quite popular.
Marilyn Rootham, Rootham Gourmet, Guelph, Ontario

PREPARED FOODS
DEVELOPMENT TRENDS & TECHNOLOGIES FOR FORMULATORS & MARKETERS

Marketwatch

August 11, 2006

More Things Change

Consumers continue to embrace the concept of organic food items, and manufacturers are responding in all areas of the supermarket, including the frozen food aisles.

Seeds of Change, for example, has augmented its organic frozen entrées with Spicy Yucatan Frijoles & Vegetables, a dish of Poblano chilies, smoked tofu, roasted corn, black beans, green onions, cilantro and agave. (The products also demonstrate the company's efforts to incorporate flavors from around the globe, also evidenced in its two new pasta sauces--Arrabiatta and Puttanessca.)

A search of Mintel International's Global New Products Database (GNPD) finds 16 frozen organic meals introduced in the past year. Curiously, though organic products would seem a more difficult criteria to meet, that positioning had almost as many frozen entrée introductions as "all natural," which registered 26. That number includes Kashi's launch of a new line of all-natural frozen entrées. The company's first foray into that territory will include six 10oz entrées in poultry, seafood and vegetarian varieties.

PREPARED FOODS
DEVELOPMENT TRENDS & TECHNOLOGIES FOR FORMULATORS & MARKETERS

Flavors in the Limelight

By Marcia A. Wade, Technical Editor
May 1, 2005

The 2005 Prepared Foods' "R&D Trends Survey: New Flavorings Systems" constructs a blueprint that manufacturers can follow as they prepare to create new, flavorful products marketable to today's sophisticated customers.

Lime on My Mind

At 54% and 51%, lemon and lime are neck and neck as the ingredients that manufacturers (respondents to the PF survey) were most likely to consider for use in products for which they are responsible. "Lime is a huge part of the Hispanic flavor profile," says Doug Renfro, co-owner of Renfro Foods (Fort Worth, Texas), a salsa and relish manufacturing company.

Hispanic flavoring trends and ingredients are becoming widely prevalent beyond Hispanic populations. As a result, in recent years, large tortilla chip companies have added lime-flavored chips to their inventory.

Chips are not the only application where limes have become popular. While limes have long been a welcome addition to soda in Mexican restaurants, lime flavor is now drawing huge success in the Coca-Cola Company's (Atlanta) Diet Coke and Coke with lime, and PepsiCo's (Purchase, N.J.) Pepsi with lime. "Non-ethnic people like me are buying it weekly," says Renfro.

It is likely that more than half of the exhibitors at the RCA trade show sold an ingredient related to Hispanic and Southwest cuisine or used a Hispanic application to display their ingredient. In addition, the winner of the RCA's 2005 Culinology Tradeshow Award, Del Real Foods (Mira Loma, Calif.) served traditional pork carnitas, beef barbacoa, Mexican rice and refried beans. Arturo Barragan, a sales manager for the company, commented that for a period of time, customers lost interest when Del Real Foods attempted to make their products less authentic. Now, after resuming their traditional style, their foodservice products have increased in distribution and are sold nationwide at Costco Wholesale (Issaquah, Wash.).

Ethnic specialties are broadening tremendously. Even a year ago, chipotle, made from dried and smoked jalapeño peppers (with a barbecue-like flavor), was not well recognized. Now it is the "in" ingredient. "Ancho pepper is also rising in popularity. It is to poblano what chipotle is to jalapeño,"

says Renfro. Chipotle and ancho peppers are available in several forms, as a puree or dehydrated, and ground as a powder to be sprinkled on food or grilled on meat.

"The ancho could be the next chipotle in terms of a new dried pepper with a smoky aroma," opines Renfro. "Fire-roasting just about anything, if it's done properly, imparts flavor."

Pepper Profile: Ancho/Poblano

by Dave DeWitt

This chile is a pod type of the *annuum* species. The name *ancho* means 'wide,' an allusion to the broad, flat, heart-shaped pods in the dried form. The fresh pod is called *poblano*.

The Plant

Anchos are multiple-stemmed and compact to semi-erect, semi-woody, and about 25 inches high. The leaves are dark green and shiny, approximately 4 inches long and 2-1/2 inches wide, and the corollas are off-white and appear at every node. The flowering period begins 50 days after sowing and continues until the first frost. The pods are pendant, vary between 3 to 6 inches long, and 2 to 3 inches wide, are conical or truncated and have indented shoulders. Immature pods are dark green, maturing to either red or brown, and the dried pods are a very dark reddish-brown, nearly black. They are fairly mild, ranging from 1,000 to 1,500 Scoville Units.

Agriculture

This variety is one of the most popular peppers grown in Mexico, where about 37,000 acres of it are under cultivation. The ancho/poblano varieties grow well in the U.S. but only about 150 acres are planted. Growers in the eastern U.S. reported their plants grown in Wharton, New Jersey, topped four feet and needed to be staked to keep them from toppling over. These plants produced well, but the pods never matured to the red stage before the end of the growing season. The usual growing period is 100 to 120 days and the yield is about fifteen pods per plant, although there are reports of up to thirty pods per plant.

Culinary Usage

Fresh poblanos are roasted and peeled, then preserved by canning or freezing. They are often stuffed to make chiles rellenos. The dried pods can be stored in airtight containers for months, or they can be ground into a powder. Anchos are commonly used in sauces called *moles*.

Roasted Poblano Chiles Stuffed with Spiced Goat Cheese

Poblano chiles impart a distinctive taste to these rellenos and are usually milder than the New Mexican

varieties. The filling is a combination of traditional Mexican and New Southwestern ingredients.

- 2 teaspoons ground red New Mexican chile
- ½ cup goat cheese
- ½ cup ricotta cheese
- 1 cup walnuts, chopped fine
- ½ cup raisins
- 1/4 teaspoon ground cinnamon
- 1/4 teaspoon ground cloves
- 4 large poblano chiles, roasted and peeled, stems left on
- Flour for dredging
- 4 eggs, separated
- 4 tablespoons flour
- 2 teaspoons baking powder
- 1 tablespoon water
- 1/4 teaspoon salt
- Vegetable oil for frying

Combine the ground red chile, cheeses, walnuts, raisins, cinnamon, and cloves to make the filling. Make a slit in the side of each pepper and stuff with the filling. Roll each chile in the flour and shake off the excess.

Beat the egg whites until they are stiff. In a separate bowl, combine the egg yolks and the remaining ingredients (except the oil), then gently fold them into the egg whites to make a batter.

Carefully dip the chiles into the batter and coat well. Heat 2 to 3 inches of oil in a pan to 350 degrees. Add the chiles and fry until they are lightly browned, turning them once. Remove and drain on paper towels.

Serves: 4

Heat Scale: Mild

Top of Page

Proceedings of the 16th International Pepper Conference
Tampico, Tamaulipas, Mexico. November 10 – 12, 2002

EFFECT OF CONTROLLED ATMOSPHERES ON QUALITY OF GREEN PEPPER POBLANO (ANCHO)

J. Morales-Castro, C.M. Avila Vázquez, M.Rocha-Fuentes, A. Ochoa-Martínez y A. Gallegos-Infante
Instituto Tecnológico de Durango
Blvd.. Felipe Pescador 1830 ote
34080 Durango, Dgo. México
E-mail: julianam@terra.com.mx

Keyrwords: Controlled Atmospheres (CA), Chile Poblano, Chile Ancho, *Capsicum annum*

ABSTRACT. Chile Poblano (ancho) was stored under different Controlled Atmospheres. Oxygen concentrations of 5, 10, 15 and 21% oxygen were used. Carbon dioxide concentrations applied were 5 and 10%.Temperatures tested were 0, 5, 10, 15° C and ambient temperature. Parameters evaluated were ascorbic acid, acidity, soluble solids, firmness and color which were monitored weekly. Results showed that ascorbic acid decreased in a range of 11-70% loss, and it was affected by oxygen concentration and time. Acidity decreased with time, but it was not affected by temperature and oxygen concentrations. Soluble solids were not affected by gas concentrations, decreasing only with time. Firmness decreased significantly with time; however, it depends on oxygen and carbon dioxide concentrations. Weight loss was minimun and color was maintained at all temperatures. The best conditions to store chile poblano (ancho) were at temperature of 0° C and 10% oxygen concentration.

INTRODUCTION. Controlled Atmosphere Storage (CAS) has been successful in maintain quality of fruits and vegetables. Modified Atmosphere Packaging, has also been used for the same purpose. Chile Poblano, is widely used in Mexico but postharvest studies on this type of chile are scarce. On the other side, reports have been numerous on bell pepper, specially, using MAP to enhance shelf life. Gonzáles-Tiznado, (1993) used bags from LDPE to extend shelf life of bell pepper for 20 days at 10 °C. In 1998, González et al., found that a treatment with hot water combined with packaging in bags from LDPE for 4 minutos a 53° C was effective in lower respiration rate, reduce damage, maintain turgency and green color keeping the overall quality for 28 days at 8°C. Other studies have used bell pepper in stripes and cubes storing them under controlled atmospheres using CO_2. Results have been mixed (López-Gálvez et al., 1997; Cantwell et al., 1998).

Regarding "Chile Poblano" (or ancho), it is highly perishable, with a shelf life of one to two weeks at ambient temperature. Refrigeration is not used neither Controlled Atmosphere Storage. In light of the above, these studies were carried out in order to evaluate the effect of Controlled Atmosphere Storage on quality parameters of "Chile Poblano".

MATERIALS AND METHODS. Chile Poblano was purchased from a local distributor "Chilera Serrano" of the Francisco Villa Market of the City of Durango, Mexico, within 24 hrs after harvest or the same day of harvest. The peppers were washed with water and soap, its weight and volume were determined; they were disinfected in a solution of sodium hypoclorite with 200 ppm for 5 minutes. Peppers were drained, dried and placed in the glass chambers in an average of eight peppers per jar.

The atmospheres evaluated were: O_2 concentrations of 5, 10 y 15% and the control at 21% and stored at 5°C of temperature (Experiment "A"; chile from Vicente Guerrero and Poanas, Dgo.). Another experiment, aimed to evaluate the effect of CO_2 in conjunction with O_2 utilized 5 and 10% O_2 with 0, 5 and 10 % of CO_2 and a control of 21% of O_2 and 0% of CO_2 (Experiment "B", chile from Sinaloa and Zacatecas states) at 0°C of temperature. A last experiment was carried out at 5, 10 and 21 % of O_2 with 0 and 10% of CO_2 at temperature of 0° (Experiment "C", chile from Poanas, Dgo).

The parameters evaluated were color (using the scale L, a, b., with a Mini Scan Hunter Lab Mod 4500L) ascorbic acid (Ranganna, 1977) acidity (A.O.A.C. No. 942.15, 1977) , soluble solids (Refractometer), acidity and firmness by punction using an Instron Universal Machine (Mod. 1132) with 5 Kgf.

Data was analyzed using the software STATISTICA for Windows, version 4.3, (Statsoftt, Inc., 1993, U. A.) with a level of significance of 5% (p £ 0,05).

RESULTS AND DISCUSSION

Ascorbic Acid. Mexican chile id an important source of ascorbic acid. Reported concentrations are in a range of 46.6-243 mg/100 g of dry weight (Wimalasiry and Wills, 1983; Nisperos-Carriedos et al., 1992; Howard et al, 1994;Lee et al 1995). Chile used for this studies was analyzed initially and the values found were: Vicente Guerrero (233 mg/100g), Poanas (262 /100g), Sinaloa (150 mg/100g) and Zacatecas (241 mg/100g). For all treatments evaluated, there was a decrease on these values and it was found that oxygen concentration and time had a significant effect on ascorbic acid loss. Losses were in the range of 11-70% (Figure 1).

Acidity. This value represent the amount of organic acids within the fruit, amount that is decreasing as fruits are maturing (Cantweell, 1994). It has been reported that acids present in Capsicum plans are malic and oxalic acids (Dewitt et al, 2000). The results of this study, showed that there was a loss of 25 % on the acidity value and time was the only parameter that affected this value. Neither oxygen or temperature were important (Figure not shown).

Soluble solids. were not affected by oxygen and carbon dioxide concentration and the results were affected just for the time of storage, trend that si confirmed by others authors that mention that soluble solids usually increase as fruit is ripening and once senescence is reach, this value decreases (Gorny and Kader, 1998), (Figure 2).

Firmness. Few studies have shown change in firmness of chile. For the studies reported here, with Chile Poblano it was found that firmness decreases for all treatments evaluated. For example, for chile from Poanas (Dgo), losses were in the range of 22% after 8 weeks of storage at 0o C, while at ambient temperature, after 2 weeks of storage, the value of firmness is similar to that obtained after 8 weeks. Experiments with CO_2 presented higher firmness loss (36%) while oxygen did not affect firmness significantly (Figure 3).

Weight loss. Weight losses for the atmospheres tested were in a range of 1-10%. At 0° C after 8 weeks of storage, weight loss was around 5%, value compared with that reported by Lownds et al (1993), that found percentages of 16-25% (Figure not shown).

Color. For most experiments, values for color obtained were in the range of – 4 to -2, values that indicate green color. The temperatures of 0 and 5°C kept the green color better, since those chiles stored at ambient temperature, changed to positive values sooner, which indicates a trend toward a red color (Figure 4).

CONCLUSIONS

Ascorbic acid loss is affected by oxygen and time, while color is affected by temperature. $C0_2$ affects significantly firmness, while oxygen do not affect this parameter. Oxygen concentration of 10% and a temperature of 0° C are the best conditions for keeping pepper quality; however, further studies are necessary in order to evaluate the possibility of chilling injury at this low temperature.

BIBLIOGRAPHY

AOAC. 1997. Official Methods of Analysis 15 th Association of Official Analytical Chemistry. Washington, D. C. Chap. 37.

Cantwell, M. and López-Gálvez, G. 1998. Quality of Red Green Fresh-cut Peppers During Storage. Dept. Vegetable Crops, University of California, Davis, CA 95616.

Dewitt, D. Stock. M. T. and Hunter, K. 2000. Los Poderes Curativos de los Chiles. Editorial Diana.

Gonzalez, G., and Tiznado, M. 1993. Postharvest Physiology of Bell Pepper Stored in Low Density Polyethylene Bags. Centro de Investigación en Alimentación y Desarrollo. Hermosillo, Sonora. 450-454

González-Aguilar,G. A., Cruz,R. and Baez, R. 1998. Storage Quality of Bell Peppers Pretreated With Hot Water and Polyethylene Packaging. J. of Food Quality 22:287-299.

Gorny, J. R. and Kader, A. A. 1998. Fresh-cut Products: Maintaining Quality and Safety, UC Davis, Workshop Sep. 15-16.

Howard, L. R, R. T. Smith, A. B. Wagner, B. Villalon and E. E. Burns. 1994. Provitamin A and Ascorbic Acid Content of Fresh Pepper Cultivars (*Capsicum annum*) and Processed Jalapeños. J. Food Sci 59(2):362-365.

Lee, Y., L. R. Howard and B. Villalon. 1995. Flavonoids and Antioxidant Activity of Fresh Pepper (*Capsicum annum*) Cultivars. J. Food. Sci. 60(3).473-476.

Lownds, N. K; Banaras, M. and Bosland, P.W. 1993. Relationships Between Postharvest Water Loss and Physical Properties of Pepper Fruit *(Capsicum annuum L.*). HortScience, 28(12):1182-1184.

Nisperos-Carriedos, M. O., B. S. Buslig and P. E. Shaw. 1992. Simultaneous Detection of Dehydroascorbic, Ascorbic and Some Organic Acids in Fruits and Vegetables by HPLC. J. Agric. Food Chem. 40:1127-1130.

Rangana, S., 1977. Manual of Analysis of Fruit And Vegetables Products, Trata, Mc Graw -Hill Publishing Company Limited, New Delhi, p. 94-95.

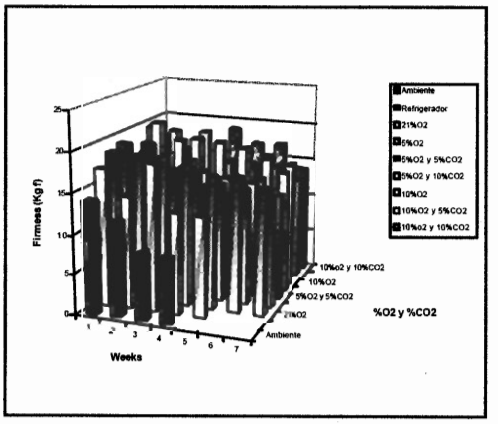


Figure 1. Effect of oxygen concentration and time on ascorbic acid in chile from Vicente Guerrero at 5° C.

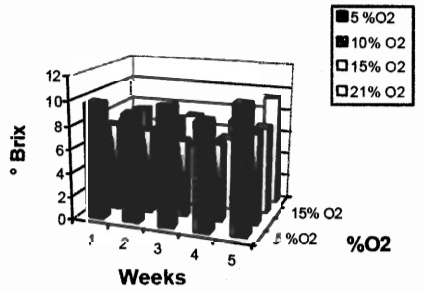


Figure No. 2. Effect of time and gas concentrations on soluble solids on chile verde from Poanas, Dgo at 0 °C

Figure No. 3. Effect of time and gas concentration on firmness of Chile Poblano c.v. ancho from Zacatecas at 0° C

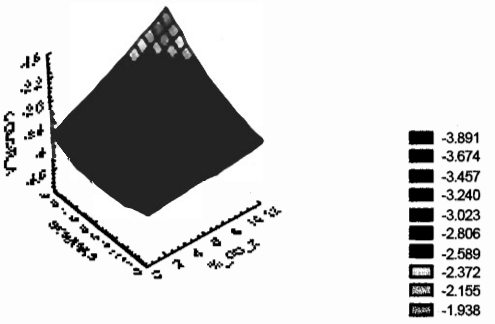


Figure 4. Effect of time and gas concentrations on Chile Poblano from Poanas, at 0° C

Acknowledgments:

The support from the National Council of Science and Technology, CONACYT, is appreciated

Culinary Trend Mapping Report, Summer 2004: A Quarterly Journal of Food and Ingredient Insight

Published by: Packaged Facts

Published: Aug. 1, 2004 - 108 Pages

Introductory Offer: Subscribers to a year's subscription of the Culinary Trend Mapping℠ Report will also receive a free copy of the 2004 Chefs' Council Report, an annual summary of observations and predictions from CCD's member chefs. Subscribe today and learn what these tastemakers believe will characterize 2004's trends in ethnic cuisines, healthy eating, fast food, comfort foods and sustainable agriculture.

Table of Contents

Each quarter Culinary Trend Mapping Report will offer an unparalled view into whatâ€™s hot - and what will be - in the food world.

Inside the 108-page Summer 2004 Issue:

Classification of Culinary Trends By Stage - Where are They Now?

- **Stage 1**
  - Pimeton
  - Tagine
  - Yuzu
- **Stage 2**
  - Chorizo
  - Pomegranate
  - Quinoa
- **Stage 3**
  - Ahi Tuna Salad with Tropical Fruit
  - Citrus Soy Glazed Salmon
  - Poblano Chile
- **Stage 4**
  - Artisan Breads
  - Sea Salt
  - Tofu
- **Stage 5**
  - Low Temperature Cooking (Braising)
  - Sweet/Savory Flavor Profile
  - Wasabi
- **Chefâ€™s CouncilÂ® Feature Article**
  - Chef Speak: â€œGoing with the Grainsâ€?
- **Wharf Research Study**
  - Primary, Proprietary Research Examining What Consumers are Saying About These Products

File
fou

Fire
can'
the
/Us
Peti
Atta
Map

C
th
fi
n
fc
c
o
o
ty

(segmented by product, and then by region, gender and age)

- **Profile of Mediterranean Cuisine**
  - Emerging Ethnic Cuisine - and a Profile of Joyce Goldstein, consultant and cookbook author and former owner of the pan-Mediterranean-themed San Francisco restaurant, Square One

- **Stats**
  - Packaged Facts data on Mediterranean cuisine and food ingredients.

- **Strategic Implications**
  - â€œMediterranean Beyond Italyâ€?

- **Back Trends**
  - Looking Back: â€œThe Magic Bulletâ€? of weight loss products

Sources

Inside the 78-page Spring 2004 Issue:

Classification of Culinary Trends By Stage - Where are They Now?

- **Stage 1**
  - Buckwheat Noodles
  - Kaffire Lime & Leaves
  - Mole
  - Naan
  - Wood Plank Cooking

- **Stage 2**

- Farm-Raised Seafood
- Grass-Fed Beef
- Herbed Desserts
- California Farmstead Cheese

- **Stage 3**
  - Sake
  - Jicama

- **Stage 4**
  - Tomatillo
  - Sweet Heat

- **Stage 5**
  - Caesar Salad

- **Chefâ€™s CouncilÂ® Feature Article**
  - Chef Speak: "Still Hailing Ceasar"

- **Wharf Research Study**
  - Primary, Proprietary Research Examining What Consumers are Saying About These Products (segmented by product, and then by region, gender and age)

- **Profile of Latin American Cuisine**
  - Emerging Ethnic Cuisine - and a Profile of Chef James Schenk, owner of the South American-themed San Francisco restaurant, Destino

- **Stats**

Abstract

Introducing the Summer 2004 issue of the *Culinary Trend Mapping Report: A Quarterly Journal of Food and Ingredient Insight* , the second issue of the series.

Produced in collaboration between the Center for Culinary Development and Packaged Facts, the *Culinary Trend Mapping Report* is a new quarterly report on food and ingredient trends and developments. Four times a year, subscribers will receive a 90+ page journal that:

- Identifies 12-15 ingredients, dishes, cooking styles, and flavor profiles, and their "maturity" level according to CCD's unique, 5-stage tracking process.
- Delves in-depth into each trend and discusses what they mean for the food industry.
- Gives proprietary insight into how consumers are reacting and adopting these trends.
- Offers strategic implications for food manufactures, retailers, and foodservice clients as they look ahead 12 months.
- Taps the expertise of CCD's exclusive 80-member Chefs' Council, with feature articles written by member chefs offering their perspectives on trends.

The *Culinary Trend Mapping Report* is an indispensable tool for those whose job it is to stay abreast of what's hot - or what will be - in the food world. Four times a year, subscribers to the Report will receive a 90+ page journal packed with trends, data, strategies and insight on the food industry that simply isn't available anywhere else.

Check the Table of Contents to see what hot trends are covered in this issue.

Trend Mapping
CCD's Trend Mapping technique is a validated method designed to determine which culinary trends are "gaining traction" and which are simply flashes in the pan. Trend Mapping is guided by the premise that major food trends pass through five distinct stages on their way to the mainstream:

- **Stage 1**: The ingredient, dish and/or cooking technique appears at upscale dining establishments, ethnic and popular independent restaurants.
- **Stage 2**: The item is featured in specialty consumer-oriented food magazines, such as Gourmet and Bon Appetit plus retail stores such as Sur La Table that target culinary professionals and serious home cooks.
- **Stage 3**: The item begins to appear in mainstream chain restaurants -- Applebee's or Chili's -- as well as retail stores such as Williams-Sonoma that target recreational cooks.
- **Stage 4**: Publications such as Family Circle and Better Homes and Gardens pick up the buzz.
- **Stage 5**: Finally, the trend makes its way to quick service restaurant menus and are either starting to appear or are having increased presence on grocery store shelves.

What's Ahead?
Here's a sampling of the ingredients and trends that will be featured in upcoming issues of the Culinary Trend Mapping Report:

Winter 2005
Trend Mapping, including (not an exhaustive list):

- Coconut milk

- Ethnic Condiments (such as sambal, fish sauce, chutneys)
- Pho
- Piquillo peppers
- Garam Masala spice blend
- Cooking Method: Smoking

Cuisine Focus: Regional American Cuisine
Primary Consumer Research
Strategic Implications
Chefs' Council Article The Rise of Chiles in America
Looking Back: Does that Duck have a Resume? Regionality is Hitting Home

What is the Center for Culinary Development (CCD)?
Based in San Francisco, CCD is a food and beverage product development company that blends culinary creativity with strategic marketing expertise. Their strength in identifying the latest food trends, from both a culinary and consumer-behavior perspective, makes them uniquely qualified to help clients create food products that satisfy consumer expectations. CCD has been responsible for many popular food product introductions, most recently the new Pannido sandwich from Jack in the Box.

For example, CCD clients have an inside track on culinary developments such as:

- The undermining of the Chinese hold on the American palate by Pan-Asian cooking
- Regional American cooking and "small plate" eating trends would find their way from the restaurant to home kitchen.
- Consumers nationwide would have a seemingly insatiable appetite for low-carb foods.

CCD has looked to its 80+ member Chefs' Council, comprising the nation's most prominent culinary experts, to help identify emerging trends.

What is the Chefs' Council?
The Chefs' Council is an 80+ member panel of nationally recognized, award-winning chefs, food writers, nutritionists, instructors and other food professionals who advise CCD on culinary trends and developments. Representing restaurants, cooking schools and publications from all regions of the country, the council members represent the leading edge of

the food industry. Members are regularly featured in magazines such as Food and Wine, Bon Appetite and Gourmet.

For more information on our partner for this quarterly report, please click to The Center for Culinary Development website.

Subscribe to *Culinary Trend Mapping Report* today and benefit from Packaged Facts' 30+ years of food industry and market research expertise. A year's subscription, which includes four issues sent quarterly, is $4,995. Or, you can purchase an individual quarter's report for $1,750.

Get Full Details About This Report >>

About MarketResearch.com

MarketResearch.com is an online aggregator selling over 95,000 market research reports, company profiles and country profiles from more than 400 research firms. Our reports will provide you with the critical business and competitive intelligence you need for strategic planning and marketing research. Coverage includes the US, UK, Europe, Asia and global markets.

9/16/2006 mrpv6

ON FOOD AND COOKING

The Science and Lore of the Kitchen

COMPLETELY REVISED AND UPDATED

Harold McGee

Illustrations by Patricia Dorfman, Justin Greene, and Ann McGee

SCRIBNER
New York London Toronto Sydney

SCRIBNER
1230 Avenue of the Americas
New York, NY 10020

First Scribner revised edition 2004

SCRIBNER and design are trademarks of Macmillan Library Reference USA, Inc.,
used under license by Simon & Schuster, the publisher of this work.

For information about special discounts for bulk purchases,
please contact Simon & Schuster Special Sales at
1-800-456-6798 or business@simonandschuster.com

Set in Sabon

Manufactured in the United States of America

5 7 9 10 8 6 4

Library of Congress Control Number: 2004058999

ISBN 0-684-80001-2

Page 884 constitutes a continuation of the copyright page.

erated volatiles, some pungent, some oniony, some green, some even sweet.

The Bean Family: Licorice and Fenugreek

Licorice Licorice comes from the roots of *Glycyrrhiza glabra,* a native of southwest Asia. Its English name is a much-altered version of its genus name, which derives from the Greek for "sweet root." The woody roots of this shrub are remarkable for containing a steroid-like chemical, glycyrrhizic acid, that is 50–150 times sweeter than table sugar. The water extract of the roots contains many different compounds, including sugars and amino acids, which undergo flavor- and pigment-producing browning reactions with each other when the extract is concentrated. Licorice extracts are available as dark syrups, blocks, or powders, and are used in various confections, to give color and flavor to dark beers, porter, and stout, and to flavor tobacco for cigars, cigarettes, and chewing. Many licorice candies are flavored with anise-like anethole (p. 414), but licorice root itself has a more complex aroma, with almond and floral notes.

Thanks to its hormone-like chemical structure, glycyrrhizic acid has a number of effects on the human body, some helpful and some not. It helps soothe coughs, but it also can disrupt normal regulation of mineral and blood pressure levels. Licorice is therefore best consumed in moderation and infrequently; daily consumption can sometimes cause a significant rise in blood pressure and other problems.

Fenugreek Fenugreek is the small, hard seed of a bean relative, *Trigonella foenum-graecum,* that's native to southwest Asia and the Mediterranean. Its name comes from the Latin for "Greek hay." Fenugreek is somewhat bitter and has a very distinctive sweet aroma, reminiscent of dry hay as well as maple syrup and caramel, that comes from a chemical called sotolon, which is also an important volatile in molasses, barley malt, coffee, soy sauce, cooked beef, and sherry. The outer cell layer of the fenugreek seed contains a water-soluble storage carbohydrate (galactomannan), so that when the seeds are soaked, they exude a thick, mucilaginous gel that gives a pleasant slipperiness to some Middle-Eastern sauces and condiments (Yemen's *hilbeh*). Fenugreek is a component of various spice mixtures, including Ethiopian berber and some Indian curry powders.

Fenugreek leaves are bitter and slightly aromatic, and are enjoyed as a fresh or dried herb in India and Iran.

Chillis

Chillis, or "chile peppers," the fruits of small shrubs native to South America, are the most widely grown spice in the world. Their active ingredient, the spectacularly pungent chemical capsaicin, protects the seeds of the chilli fruit, and appears to be a chemical repellant aimed specifically at mammals. Birds, which swallow the fruits whole and disperse the seeds widely, are immune to capsaicin; mammals, whose teeth grind up the fruit and destroy the seeds, are pained by it. It's a wonderfully perverse achievement for our mammal species to have fallen in love with this anti-mammalian weapon and spread the chillis much further than any bird ever did!

The success of the chilli has been remarkable. World production and consumption are now some 20 times that of the other major pungent spice, black pepper. It is ubiquitous in Central and South America, Southeast Asia, India, the Middle East, and North Africa. In China the chilli is a major spice in Sichuan and Hunan provinces; in Europe, Hungary has its paprika and Spain its pimenton. In the United States, salsas became more popular than ketchup in the 1980s, thanks to the influence of Mexican restaurants. Mexico remains the most advanced chilli culture, where several different varieties may be blended to obtain a particular flavor, and

where the substance of many sauces is contributed by chillis, without the aid of flavorless flours or starches.

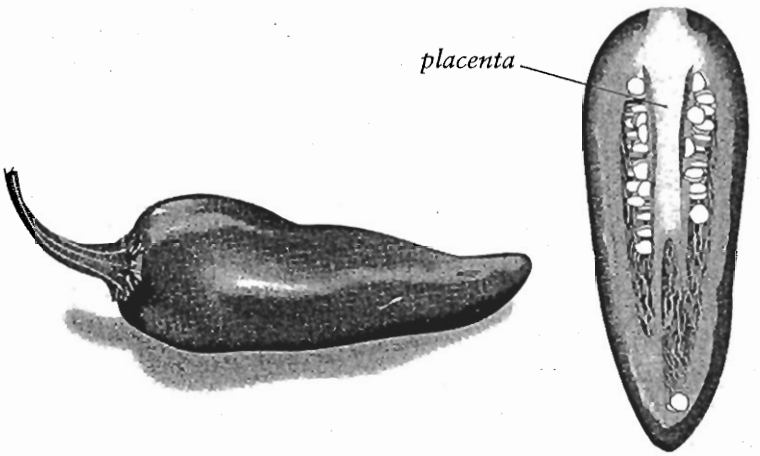
Chillis and Capsaicins There are about 25 species of *Capsicum,* most natives of South America, of which five have been domesticated. Most of our common chillis come from one species, *Capsicum annuum,* which was first cultivated in Mexico at least 5,000 years ago. Chillis are hollow fruits, with an outer wall rich in carotenoid pigments that encloses the seeds and the tissue that bears them, a pale, spongy mass called the placenta. (For chillis as vegetables, see p. 331). Their pungent chemicals, the capsaicins, are only synthesized by the surface cells of the placenta, and accumulate in droplets just under the cuticle of the placenta surface. That cuticle can split under the pressure and allow the capsaicin to escape and spread onto the seeds and the inner fruit wall. Some capsaicin also seems to enter the plant's circulation, and can be found in small quantities within the fruit wall and in nearby stems and leaves.

The amount of capsaicin that a chilli contains depends not only on the plant's genetic makeup, but on growing conditions—high temperatures and drought increase production—and on its ripeness. The fruit accumulates capsaicin from pollination until it begins to ripen, when its pungency declines somewhat: so maximum pungency comes around the time that the green fruit begins to change color.

There are several different versions of the capsaicin molecule found in chillis. This may be why different kinds of chillis seem to produce different kinds of pungency—quick and transient, slow and persistent—and to affect different parts of the mouth.

Capsaicin's Effects on the Body The effects of capsaicin on the human body are many and complex. As I write in 2004, the scorecard is fairly positive. Capsaicin does not appear to increase the risk of cancer or stomach ulcers. It affects the body's temperature regulation, making us feel hotter than we actually are, and inducing cooling mechanisms (sweating, increased blood flow in the skin). It increases the body's metabolic rate, so that we burn more energy (and therefore retain less in storage as fat). It may trigger brain signals that make us feel less hungry and more satiated. In sum, it may encourage us to eat less of the meal it's in, and to burn more of the calories that we do eat.

Of course there's also capsaicin's irritating effects, which can be pleasurable in the mouth but not necessarily elsewhere. (This is why "pepper spray" is an effective weapon; it makes breathing and seeing difficult for about an hour.) Capsaicin is potent and oily and hard to wash off surfaces, so small amounts left on fingers can



The chilli fruit. The pungent chemical capsaicin is secreted by cells on the surface of the placenta, the pithy tissue that bears the seeds.

end up hours later being rubbed into an eye. Knives, cutting boards, and hands should be thoroughly washed with hot soapy water to avoid this and similar unhappy surprises. On the other hand, capsaicin irritation has found a number of medical applications; for example, when applied to the skin it helps reduce muscle pain by increasing local blood flow.

Controlling Capsaicin Pungency The pungency of any dish that contains chillis is influenced by four main factors: the variety of chilli used, the amount of chilli added, the presence or absence of the capsaicin-rich tissues, and the length of time that the chilli is in contact with the other ingredients. The cook can reduce the pungency of chillis substantially by cutting them in half and carefully dissecting and removing the spongy placental tissue and the seeds.

What about quenching the burn once the mouth is already on fire? The two surest remedies—though they're only temporary—are to get something ice-cold into the mouth, or something solid and rough, rice or crackers or a spoonful of sugar. Cold liquid or ice cools the receptors down below the temperature at which they are activated, and the rough food distracts the nerves with a different kind of signal. Though capsaicin is more soluble in alcohol and oil than it is in water, alcoholic drinks and fatty foods appear to be no more effective than cold or sweetened water at relieving the burn (carbonation adds to the irritation). If all else fails, take comfort in the fact that capsaicin pain generally fades within 15 minutes.

Dried Chillis Dried chillis are much more than a conveniently stable source of pungency and thickening power: they're the source of flavor complexity that is rare even among herbs and spices. The drying process concentrates the contents of the cells in the fruit wall, encouraging them to react with each other and generate dried-fruit, earthy, woody, nutty, and other aromatics. Drying traditionally took several weeks in sun or shade, and in much of the world it still does. Modern machine drying offers more control, and can minimize the loss of light-sensitive pigments and vitamin C, though it brings flavor differences as well. Chillis are sometimes smoke-dried (Mexican chipotles, some Spanish pimentons), which lends a characteristic note.

Other Temperate-Climate Spices

Hops Hops are the dried seed-bearing "cones" of *Humulus lupulus,* a perennial native of the Northern Hemisphere that is a relative of marijuana and hemp. The hop plant was cultivated in the Hallertau region of Germany by the 8th century, and spread to Flanders by the 14th. Though now used

Pepper Terminology

In the United States, pungent capsicum fruits are generally called "peppers," or "hot peppers," terms that stem from the early Spanish identification of capsicum pungency with black-pepper pungency. The native Nahuatl word was *chilli,* which gave rise to Spanish *chile,* and in turn to American *chili* (both a capsicum-flavored stew and the powder used to make it). Chile the country got its name from an entirely unrelated word (Araucanian for "the end of the earth"). Given the many possibilities for confusion, I agree with Alan Davidson and others that we should refer to pungent capsicums with the original and unambiguous Nahuatl name *chilli.*

almost exclusively in beer, they also flavor bread and are made into an herbal tea. Hop aroma depends on the variety, and may include woody, floral, and complex sulfur notes. It's described in more detail in chapter 13.

Mahleb Mahleb or mahaleb is the dried kernel of a small kind of cherry native to Iran, *Prunus mahaleb.* The kernels have a warm aroma vaguely suggestive of bitter almond, and are used to flavor baked goods and sweets in much of the eastern Mediterranean.

Mastic Mastic is a resin exuded from the trunk of a relative of the pistachio, *Pistacia lentiscus,* a tree native to the Eastern Mediterranean that now grows only on the Greek island of Chios. Mastic was chewed like chewing gum (hence its name, from the same root as *masticate*), and is also used to flavor various preparations, from breads and pastries to ice cream, candies,

Chilli Varieties and Pungencies

Here is a list of common chilli varieties and their relative pungencies. Pungency is rated in Scoville units, a measure invented around 1912 by pharmaceutical chemist Wilbur Scoville and later adapted to modern chemical analyses. The original method involved an overnight alcohol extraction of the pepper, and then a tasting of increasing dilutions of the extract until the pungency is barely detectable. The more the extract can be diluted, the more pungent it is, and the higher the Scoville score.

Chilli Variety	Pungency, Scoville Units
Capsicum annuum	
Bell	0–600
New Mexican	500–2,500
Wax	0–40,000
Paprika	0–2,500
Pimento	0
Jalapeno	2,500–10,000
Ancho/ poblano	1,000–1,500
Serrano	10,000–25,000
Cayenne	30,000–50,000
Capsicum chinense	
Habanero, scotch bonnet	80,000–150,000
Capsicum frutescens	
Tabasco	30,000–50,000
Capsicum pubescens	
Rocoto	30,000–60,000
Capsicum baccatum	
Aji	30,000–50,000

FedEx Express **US Airbill**

FedEx Tracking Number 8580 2592 8903

USDA NATIONAL ORGANIC PROGRAM 2006 OCT 13 1:55

Form ID No. 0200 **Recipient's Copy**

1 From
Date 10/12/06 [redacted]
Sender's Name ZAFER HERMAN Phone 626 385-0639
Company THE HAIN CELESTIAL GROUP, INC.
Address 16007 CAMINO de la CANTERA Dept./Floor/Suite/Room
City AZUSA State CA ZIP 91702

2 Your Internal Billing Reference

3 To
Recipient's Name ROBERT POOLER Phone 202 690-3055
Company NATIONAL ORGANIC PROGRAM
Recipient's Address USDA/AMS/TM/NOP/Room 4008 S. Dept./Floor/Suite/Room
We cannot deliver to P.O. boxes or P.O. ZIP codes.
Address AG STOP 0268 / 14th + Independence
To request a package be held at a specific FedEx location, print FedEx address here.
City WASHINGTON State DC ZIP 20250-0268

RECEIVED USDA NATIONAL ORGANIC PROGRAM

8580 2592 8903

4a Express Package Service *Packages up to 150 lbs.*
- [ ] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [x] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate. * To most locations.

4b Express Freight Service *Packages over 150 lbs.*
- [ ] FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

* Call for Confirmation. ** To most locations.

5 Packaging
- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [x] FedEx Box
- [ ] FedEx Tube
- [ ] Other

* Declared value limit $500.

6 Special Handling — Include FedEx address in Section 3.
- [ ] SATURDAY Delivery — Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday at FedEx Location — Not available for FedEx First Overnight.
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.
- [x] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ___ x ___ kg
- [ ] Cargo Aircraft Only

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.
- [x] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

Obtain Recip. Acct. No.

[redacted]

Total Packages	Total Weight	Total Declared Value†	Total Charges
1	2	$ .00	Credit Card Auth.

†Our liability is limited to $100 unless you declare a higher value. See back for details.

8 *NEW* Residential Delivery Signature Options If you require a signature, check Direct or Indirect.
- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Anyone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, anyone at a neighboring address may sign for delivery. *Fee applies.*

520

fedex.com 1.800.GoFedEx 1.800.463.3339