

MIEL

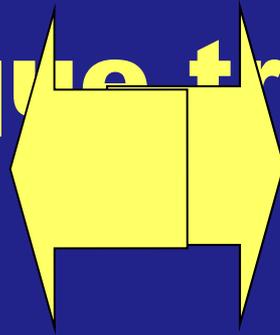
Uso para industria



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PROAPI - Argentina



que tradicional



Tecnología de extracción

- **Tecnología disponible**
- **Instalaciones**
- **Tecnología de ex**
- **Modelos asociativos**
- **Gestión**



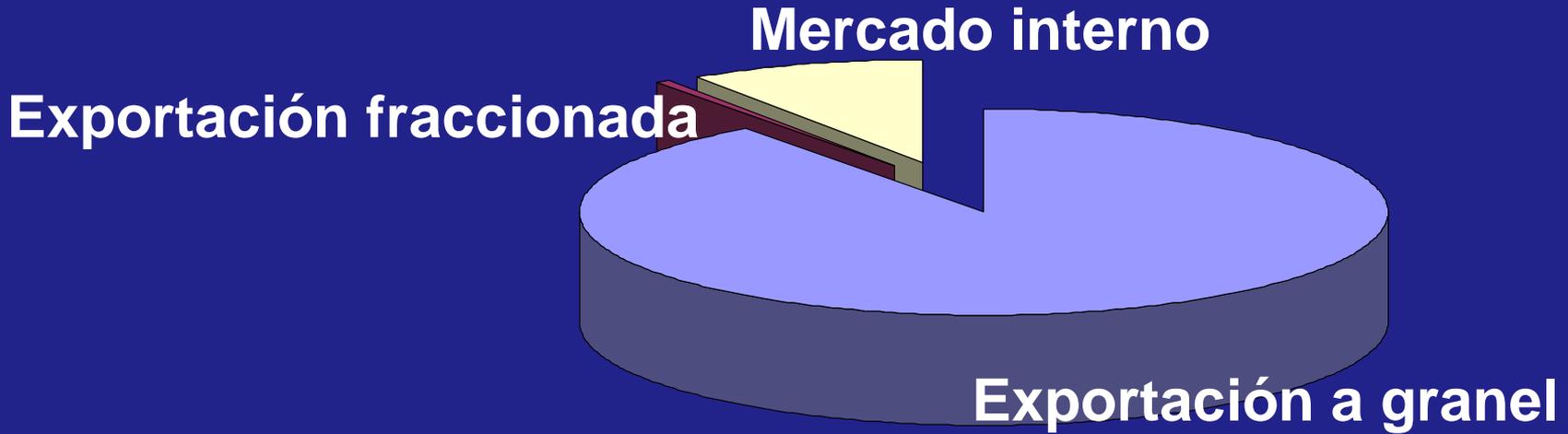
Tecnología de filtrado y fraccionado



Enfoque industrial



Enfoque industrial



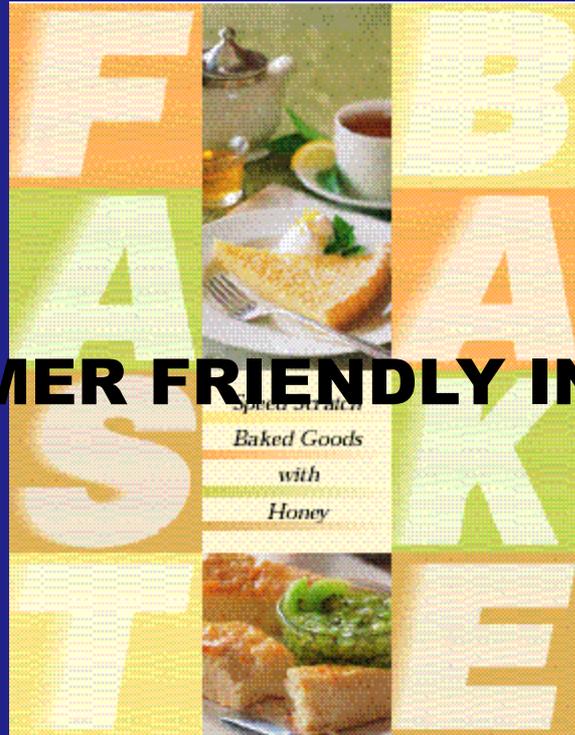
Enfoque industrial



La miel es un producto donde comienza un buen alimento

National Honey Board

“ CONSUMER FRIENDLY INGREDIENT ”



Enfoque industrial

- Apoyo a actividades científicas sobre las propiedades de la miel
- Apoyo a investigación en métodos para detectar adulteraciones y contaminantes.
- Promoción, educación y publicidad en consumidores, restaurantes, escuelas, etc
- Realización de estudios de mercado a gran escala
- Apoyo al lanzamiento de nuevos productos que incorporan miel
- Asistencia a exhibiciones para promoción de la miel

PRODUCTOS DE MIEL

- **Miel deionizada** remoción selectiva de iones
- **Miel Desproteïnizada**
- **Miel secada/deshidratada**, desecada y con aditivos que facilita el procesamiento

Secado por pulverización, microondas, secado al vacío, congelación

Uso de aditivos

para modificar y mejorar la funcionalidad del producto
se mezcla con estabilizadores (harina o almidones 20-70 %)

Mezclas de panadería, cosmética, productos cárnicos,

PRODUCTOS DE MIEL

- **Extracto de Miel**, formado por remoción de componentes específicos. Producto aromático natural derivado de la miel
- **Sabor natural a Miel**, sustancia obtenida por extracción a partir de la miel y le da su sabor
- **Miel extendida**, producto extremadamente viscoso generalmente mezclado con otros ingredientes
- **Miel ultrafiltrada**: miel a la que se removió todas las sustancias que no pasan por una membrana específica (enzimas, proteínas, polipéptidos). No hay sedimentos, menor viscosidad, uniformidad conteos microbiológicos reducidos. (0,1 micrón)

PROPIEDADES FUNCIONALES

- **Higroscopicidad:** deseado en pastelería y panes – Inconveniente en conservación.
- **Baja tensión superficial:** buen humectante en productos cosméticos – Inconveniente: espumado de la miel.
- **Carbohidratos:** propiedades endulzantes, retiene humedad, extiende vida útil, reactividad a microondas, habilitar para resaltar color y sabor
Cristalización.
- **Poder endulzante:** 1 a 1,5 más dulce que el azúcar.
- **Densidad:** depende del contenido de humedad – Separación de fases
- **Propiedades térmicas:** fundamental en procesado. Capacidad de absorber calor varía de 0,56-0,73 cal/g/°C. Baja conductividad de calor
- **Color:** oscura para industria.
- **Cristalización:** Miel crema

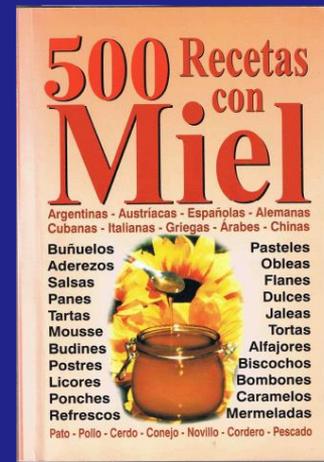
REEMPLAZO DE 1 KG DE ENDULZANTE CON MIEL

	%Sólidos	%Agua	
Miel	82.4	17.6	
Sacarosa	100	0	Agrego 1,214 kg miel y retiro 0,214 kg líquido
Jarabe de Alta Fructosa	71	29	Agrego 0,862 kg miel y 0,138 kg líquido
Jarabe de maíz	80.3	19.7	Agrego 0,974 kg miel y 0,026 kg líquido

PRODUCTOS FERMENTADOS

PANIFICADOS

- Esponjosidad que perdura por más tiempo,
 - Se seca más lentamente
 - Menor tendencia a quebrarse (higroscopicidad),
 - Horneado más uniforme con superficie más dorada a bajas temperaturas (por contenido de fructosa),
 - Efecto en el aroma.
-
- **Miel líquida en mezclas para pan,**
 - Mejora el color, la humedad y nivel de dulzura y retrogusto,
 - Estructura más fina,
 - Estables por 12 semanas a temperatura ambiente.
 - No tan aceptado con miel seca.



LACTEOS

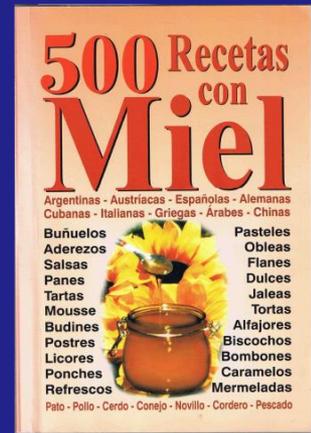
- **Leche pasteurizada endulzada con miel.**

- **Dulce de leche**

- **Yogurt.** Agregado de 10 % de miel con distintos % de leche entera y en polvo descremada, 2 controles. Mantiene el sabor mejor que los controles, mayor viscosidad. Preferido el de 10 % de Miel y 1 a 2 % leche entera.



- **Leche chocolatada con miel**, no reduce viscosidad, se mantiene en suspensión por 14 días. (84,4 % leche, 13,69 % miel y 1,83 % de cacao).

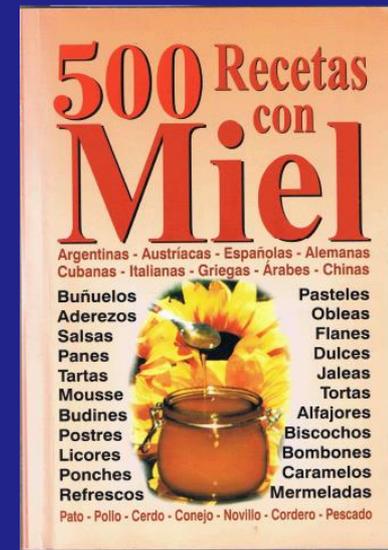


PRODUCTOS FRESCOS

PASTAS

(10 % de miel)

- Fácil amasado
 - Mejor sabor,
 - Producto uniforme,
 - No hay efectos adversos en la integridad de la masa,
 - Mayor vida útil (menos mohos).
- ❑ Con 30-40 % gomoso, dulce y más tiempo de cocción.



CONFITURAS

- En productos tradicionales (turrónes, nougat).
- En gelatinas o gomas como saborizante.
- Limitaciones en caramelos y bombones.



CEREALES PARA DESAYUNO

- Permite ajustar la consistencia del cereal.
- En forma líquida
- En forma seca para pulverizar



BARRAS DE CEREAL (SNACKS O CANDIES)

- saborizante
- ligante



❑ packaging impermeable

CHIPS

Chips de papa libre de aceite (microonda)

- mejora la textura.
- mejora el color (reacción Maillard)

Chips de maíz saborizados con miel

- no significativo en la textura
- mejora el sabor
- es un nuevo producto.

UNTABLES

- Mieles con agregado de ingredientes
- Se adicionan durante o después del sembrado.
- Conservado en heladera.

MERMELADAS Y JALEAS

- Reemplazo parcial o total de sacarosa.
- Fruta + miel (hervido o en vacío) hasta concentración de 63 %.
- Miel líquida con frutas

HELADOS



- Necesitan menor temperatura para congelarse
- Se derriten más fácilmente y a menor temperatura.
- A veces cristalizan
 - ❑ Con 8- 12 % de miel se logra buena textura.

BEBIDAS NO ALCOHOLICAS

- Clarificador de jugos de manzana (solución 4 % de agua y miel).
- Tipo de miel según la bebida.
- Se usa ultrafiltrada
- Bebidas deportivas
- Jugos vegetales
- Té helado con jugo de limón –
- Gaseosas.
- Bebidas no alcohólicas con hierbas:
- Mantiene el color, el pH, % sólidos solubles.
- Aumenta el sedimento.
- Estables microbiologicamente
- Disminuye amargura y acidez.
- Conservación a 180 días,





Honey in Non-Alcoholic Beverages

Funded by the National Honey Board and conducted at the



Honey in Chocolate Milk-Based Beverages

Summary of a research project funded by the National Honey Board and conducted at the University of Nebraska-Lincoln Food Processing Center.
Investigator: M.D. Phillips

Background

This project was designed to formulate a chocolate milk beverage using honey as the sweetener source. The use of honey in milk beverages would provide many advantages to the products, such as flavor, color and mouthfeel as well as serve as a high carbohydrate/high energy source. The heavier, thicker mouthfeel desirable in some beverage products could be enhanced by the use of honey. Honey would be a more "consumer friendly" ingredient on the label than other types of body modifiers and would lend a more "natural" and healthful image to a product. The use of honey in a chocolate

milk beverage would also produce a product with the flavor appeal children enjoy and an image that parents would find appealing as well.

Objectives

The objectives of this project were to:

- Formulate a refrigerated chocolate milk beverage containing liquid honey
- Determine the effect of honey on the elimination or control of undesirable flavors such as bitterness
- Determine the effect of honey on the modification or intensification of desirable flavors in a refrigerated chocolate milk beverage
- Determine the effect of honey on processing separation and on maintaining the color stability
- Determine the necessary processing parameters to ensure a microbiologically stable product
- Describe, where possible, the mechanisms by which honey may improve quality attributes
- Determine consumer acceptance of the products via sensory analysis

Objectives

The goal of this project was to develop two fruit juice beverages containing honey and botanicals (sage or chamomile and sweetened with honey) which would have great appeal to today's consumers.

The two main objectives of this project were 1) to formulate two different types of non-alcoholic beverages utilizing honey as the sole sweetener source and 2) to characterize the effects of the addition of liquid clover honey on non-alcoholic juice beverages.

Specific objectives were as follows:

- To formulate two non-alcoholic beverages: a cranberry juice-based beverage and a lemon juice-based beverage each containing a botanical ingredient
- To determine the effect of honey on bitterness and acidity in juice beverages over time
- To determine the effect of honey on the intensification or insensitization of desirable flavors in non-alcoholic juice beverages over time
- To determine the effect of honey on maintaining color stability over time
- To determine processing parameters utilized for this project may be feasible for any size of manufacturer, from the entrepreneur to the large food processor

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CERVEZAS

- La miel contribuye con azúcares fermentables (95 %)
- Da una cerveza más seca y suave,
 - Sabor fresco y color.
 - Es un ingrediente funcional.
- Se adiciona avanzada la fermentación.
 - Menor percepción de acidez.

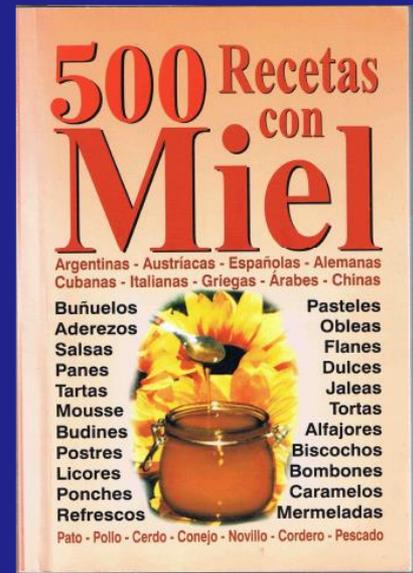


SALSAS:

Carnes conservadas, jamón cocido.

Miel en salsas frescas y conservadas:

- disminuye el sabor agrio,
- disminuye el gusto a quemado en caso de sobrecocción
- mejora la consistencia de la salsa,
- reduce la actividad de agua
- extiende la vida útil



ESCABECHE:

Escabeche de pollo con miel (0-10-20 %).

Pollo inyectado con escabeche con 20 % de miel fue superior al inmerso

HIDROMIEL:

Vinos de miel con frutas o jugos de manzana

“I Encuentro de Bebidas fermentadas a base de miel de Argentina”



Enfoque industrial

500 Recetas con Miel

Argentinas - Austríacas - Españolas - Alemanas
Cubanas - Italianas - Griegas - Árabes - Chinas

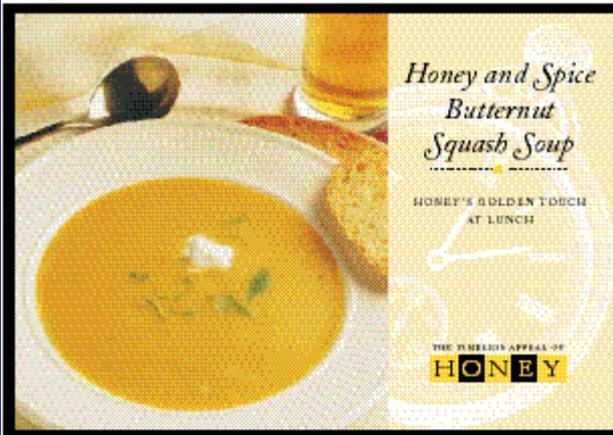
- Buñuelos
- Aderezos
- Salsas
- Panes
- Tartas
- Mousse
- Budines
- Postres
- Licores
- Ponches
- Refrescos



- Pasteles
- Obleas
- Flanes
- Dulces
- Jaleas
- Tortas
- Alfajores
- Biscochos
- Bombones
- Caramelos
- Mermeladas

Pato - Pollo - Cerdo - Conejo - Novillo - Cordero - Pescado

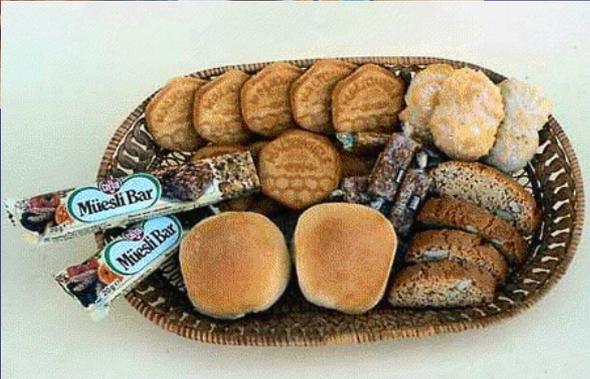




Honey and Spice Butternut Squash Soup

HONEY'S GOLDEN TOUCH
AT LUNCH

THE TIMELESS APPEAL OF
HONEY




Honey-Sweetened Drinkable Yogurt Shake

Summary of a research project funded by the National Honey Board and conducted at Michigan State University.
Investigators: Z. Urbaniak, Ph.D. and H. Vachon

Background
Yogurt usage in food manufacture is growing rapidly. New and innovative products are currently being developed which capitalize on the nutritional appeal of yogurt. Drinkable yogurt shakes and dressings, sauces, dips and desserts

Objective
The overall goal of this research project was to develop a highly desirable, low-fat drinkable yogurt shake sweetened with honey.

Background
product-the drinkable yogurt shake.

Objective
The overall goal of this research project was to develop a highly desirable, low-fat drinkable yogurt shake sweetened with honey.

This project funded by the National Honey Board and conducted at the University of Lincoln Food Processing Center when:

- Determine the effect of honey on preventing separation and on maintaining the color stability
- Determine the necessary processing parameters to ensure a microbiologically stable product
- Formulate a refrigerated drinkable yogurt shake
- Describe, where possible, the relationship between the




Honey Oil-Free Potato Chips

Summary of a research project funded by the National Honey Board and the California Polytechnic State University at San Luis Obispo.
Investigator: M. Klink, Ph.D.

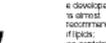
Background
The oil content of potato chips is a major concern for consumers. The National Honey Board is currently funding a research project to develop a low-fat, oil-free potato chip.

Objective
The overall goal of this research project was to develop a low-fat, oil-free potato chip that is acceptable to consumers.

This project funded by the National Honey Board and the California Polytechnic State University at San Luis Obispo.

Background
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Objective
The overall goal of this research project was to develop a low-fat, oil-free potato chip that is acceptable to consumers.



HONEY IN DRY BAKING MIXES FOR BREAD

Summary of a research project funded by the National Honey Board and conducted at Kansas State University.
Investigators: Edgar Chambers IV, PhD, and Paul M. Aramant, PhD

Background
The number of salsas available in the U.S. market has increased dramatically over the past few years. In 1991, salsas became the leading U.S. condiment replacing the ever popular ketchup. Honey is used widely in many condiments including mustard, barbecue sauces and dressings, yet only occasionally in salsa. However, as sweetened salsa market is developing as some manufacturers have begun taking salsas beyond their traditional roots.

Objective
The objective of the National Honey Board-sponsored research project was to:

1. study the desirability

containing a botanical origin, organic, all natural, functional—these salsas often bring new products to the marketplace. In this of over-growing salsas, both honey and are favorites among consumers interested in natural, drinkable, fruit- and soda-sweetened with honey are being popularly. In these alcoholic beverages, they serve as a natural, high energy, and provides flavor, vitamins, color and taste. However, the last for combining honey botanical ingredients, also naturally unaged.

The processing parameters used for this project may be feasible for low scale manufacturer, from the entrepreneur to the large food processor.



Honey in Heat Processed and Fresh Salsas

Summary of a research project funded by the National Honey Board and conducted at the University of Nebraska-Lincoln.
Investigator: M.B. Prewitt

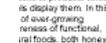
Background
The goal of this project was to develop two fruit juice beverages containing honey and botanicals. Juice beverages containing ginger or chamomile and sweetened with honey would have great appeal to today's consumers.

Objective
The two main objectives of this project were 1) to formulate two different types of non-alcoholic beverages utilizing honey as the sole sweetener source and 2) to characterize the effects of the addition of liquid cover honey on non-alcoholic juice beverages.

Specific objectives were as follows:

- To formulate two non-alcoholic beverages: a strawberry sauce-based beverage and a lemon juice-based beverage each

The processing parameters used for this project may be feasible for low scale manufacturer, from the entrepreneur to the large food processor.



Honey in Non-Alcoholic Juice Beverages

Summary of a research project funded by the National Honey Board and conducted at the University of Nebraska-Lincoln.
Investigator: M.B. Prewitt

Background
The goal of this project was to develop two fruit juice beverages containing honey and botanicals. Juice beverages containing ginger or chamomile and sweetened with honey would have great appeal to today's consumers.

Objective
The two main objectives of this project were 1) to formulate two different types of non-alcoholic beverages utilizing honey as the sole sweetener source and 2) to characterize the effects of the addition of liquid cover honey on non-alcoholic juice beverages.

Specific objectives were as follows:

- To formulate two non-alcoholic beverages: a strawberry sauce-based beverage and a lemon juice-based beverage each

The processing parameters used for this project may be feasible for low scale manufacturer, from the entrepreneur to the large food processor.

FAST



*Speed Scratch
Baked Goods
with
Honey*



BREAKFAST

HONEY-LEMON TART

INGREDIENTS	QUANTITIES
Eggs	1, 2 eggs
Flour	1 1/2 cups
Honey	2
Vanilla extract	1/2 tsp
Butter	1/2 cup
Sugar	1/2 cup
Lemon juice	1/4 cup
Vanilla extract	1/2 tsp
Butter	1/2 cup
Sugar	1/2 cup
Lemon juice	1/4 cup
Vanilla extract	1/2 tsp

- METHOD**
1. Mix eggs, flour, and honey in a bowl until smooth.
 2. Add the rest of the ingredients and mix until well combined.
 3. Preheat oven to 350°F. Roll out dough on a floured surface and cut into circles.
 4. Bake for 15-20 minutes until golden brown.

HONEY-PINEAPPLE FRENCH TOAST

INGREDIENTS	QUANTITIES
Eggs	2
Flour	1 1/2 cups
Honey	2
Vanilla extract	1/2 tsp
Butter	1/2 cup
Sugar	1/2 cup
Lemon juice	1/4 cup
Vanilla extract	1/2 tsp
Butter	1/2 cup
Sugar	1/2 cup
Lemon juice	1/4 cup
Vanilla extract	1/2 tsp

- METHOD**
1. Mix eggs, flour, and honey in a bowl until smooth.
 2. Add the rest of the ingredients and mix until well combined.
 3. Preheat oven to 350°F. Roll out dough on a floured surface and cut into circles.
 4. Bake for 15-20 minutes until golden brown.

HONEY-SWEETENED BREAKFAST CALZONES

INGREDIENTS	QUANTITIES
Eggs	2
Flour	1 1/2 cups
Honey	2
Vanilla extract	1/2 tsp
Butter	1/2 cup
Sugar	1/2 cup
Lemon juice	1/4 cup
Vanilla extract	1/2 tsp
Butter	1/2 cup
Sugar	1/2 cup
Lemon juice	1/4 cup
Vanilla extract	1/2 tsp

- METHOD**
1. Mix eggs, flour, and honey in a bowl until smooth.
 2. Add the rest of the ingredients and mix until well combined.
 3. Preheat oven to 350°F. Roll out dough on a floured surface and cut into circles.
 4. Bake for 15-20 minutes until golden brown.

HONEY-TOMATO FOCACCIA

INGREDIENTS	QUANTITIES
Eggs	2
Flour	1 1/2 cups
Honey	2
Vanilla extract	1/2 tsp
Butter	1/2 cup
Sugar	1/2 cup
Lemon juice	1/4 cup
Vanilla extract	1/2 tsp
Butter	1/2 cup
Sugar	1/2 cup
Lemon juice	1/4 cup
Vanilla extract	1/2 tsp

- METHOD**
1. Mix eggs, flour, and honey in a bowl until smooth.
 2. Add the rest of the ingredients and mix until well combined.
 3. Preheat oven to 350°F. Roll out dough on a floured surface and cut into circles.
 4. Bake for 15-20 minutes until golden brown.



HONEY-TOMATO SA VARY BREAD PLEDDING

INGREDIENTS	QUANTITIES
Eggs	2
Flour	1 1/2 cups
Honey	2
Vanilla extract	1/2 tsp
Butter	1/2 cup
Sugar	1/2 cup
Lemon juice	1/4 cup
Vanilla extract	1/2 tsp
Butter	1/2 cup
Sugar	1/2 cup
Lemon juice	1/4 cup
Vanilla extract	1/2 tsp

- METHOD**
1. Mix eggs, flour, and honey in a bowl until smooth.
 2. Add the rest of the ingredients and mix until well combined.
 3. Preheat oven to 350°F. Roll out dough on a floured surface and cut into circles.
 4. Bake for 15-20 minutes until golden brown.

¡Cuidado Con La MIEL FALSA!



Stock.com

Enfoque industrial

cera



propóleos



jalea real



polen



Cera

Industria electrónica, textil, vidriera, papelera

Agricultura, injertos

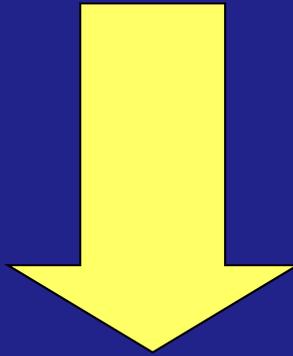
Medicina, bálsamos, ungüentos, supositorios, pomadas, emplastos

Cosmética cremas limpiadoras, astringentes, limpieza, lápiz labial

Alimentos. Chacinados, Golosinas

Enfoque industrial

Competitividad en producción primaria



Oportunidad en producción industrial