MIEL

Uso para industria

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que tradicional

Tecnología de extracción

- Tecnología disponible

- Instalaciones

Tecnología de ex

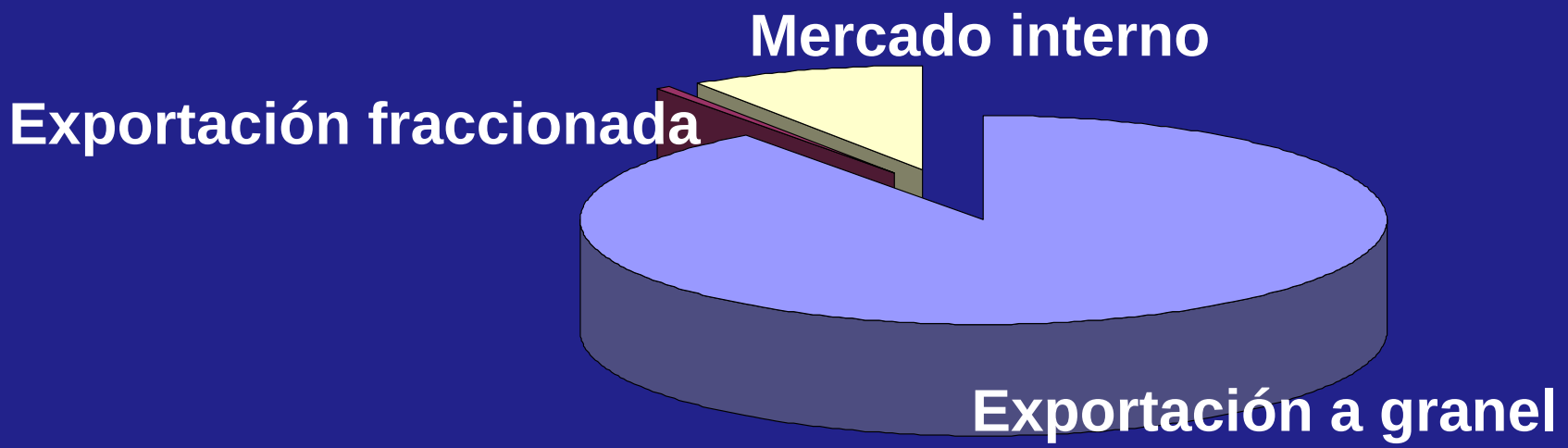
- Modelos asociativos

- Gestión

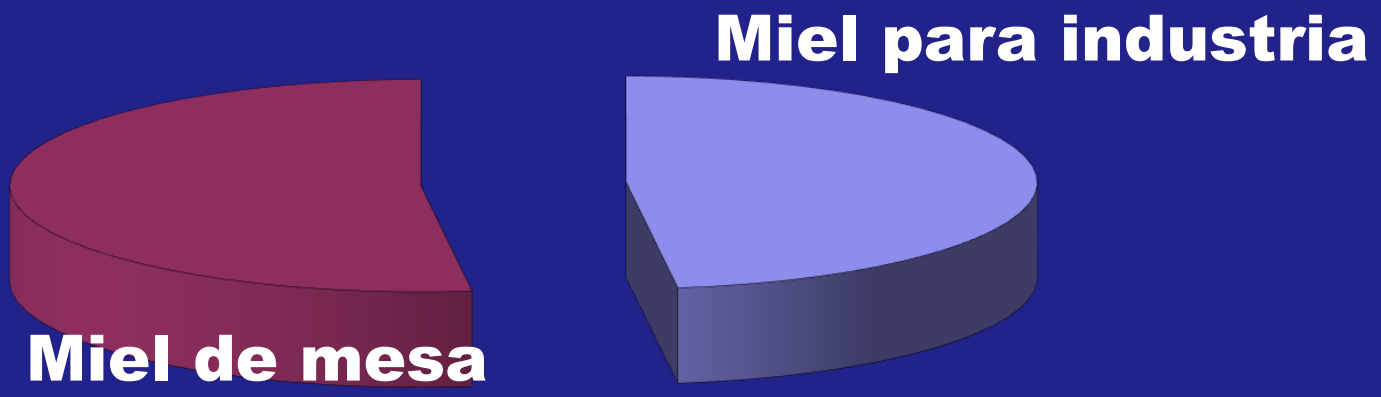
Tecnología de filtrado y fraccionado

Enfoque industrial

Enfoque industrial



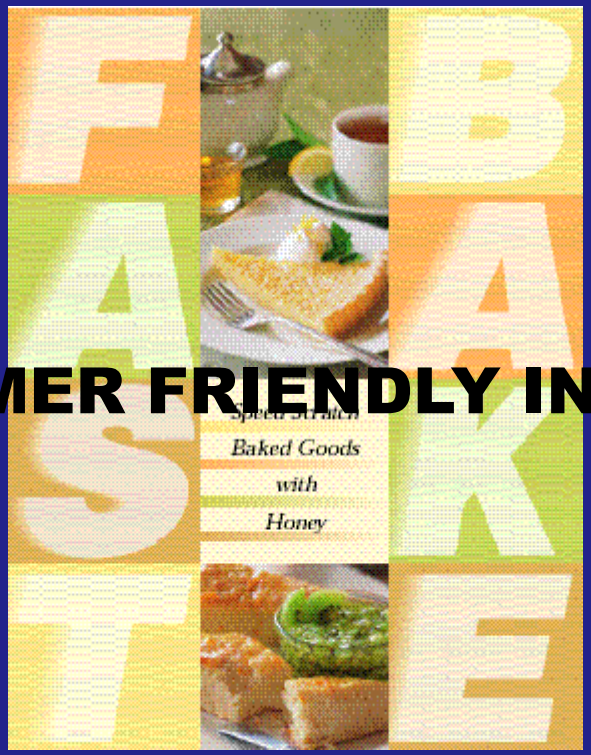
Enfoque industrial



Enfoque industrial

La miel es un producto donde comienza un buen alimento

National Honey Board



“ CONSUMER FRIENDLY INGREDIENT ”

PRODUCTOS DE MIEL

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

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, s**ustancia 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 especifica (enzimas, proteinas, 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/ºC. Baja conductividad de calor
- **Color:** oscura para industria.
- **Cristalización:** Miel crema

REEMPLAZO DE 1 KG DE ENDULZANTE CON MIEL

	%Solidos	%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 (turrones, 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 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.B. Preston.

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 preventing 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

National Honey Board • (303) 776-2337 • www.nhb.org • Page 15

Honey in Non-Alcoholic ... Beverages

...funded by the National Honey Board and conducted at the ...

Objectives
The goal of this project was to develop two fruit juice beverages containing honey and botanicals. Juice beverages containing ginseng or chamomile and sweetened with honey 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 modification or intensification 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

The 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 azucares 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.


Sumale
a tu vida
miel
Matias Yanuzzio
Cervezas Tandilia - Tandil
REDLAC

https://www.diffordsguide.com/encyclopedia/3145/cocktails/20-best-honey-cocktails

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

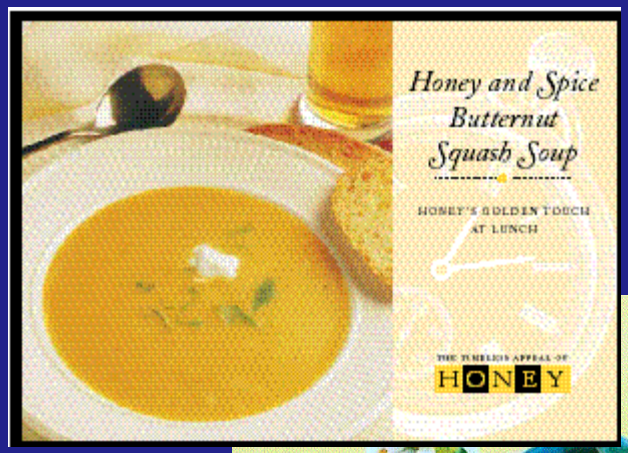
Argentinas - Austríacas - Españolas - Alemanas
Cubanas - Italianas - Griegas - Árabes - Chinas

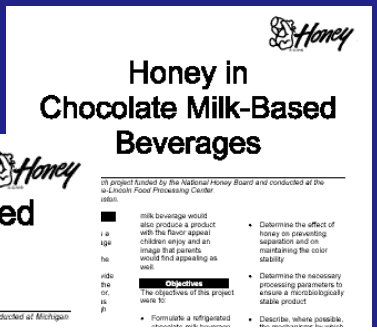
Buñuelos
Aderezos
Salsas
Panes
Tartas
Mousse
Budines
Postres
Licores
Ponches
Refrescos

Pasteles
Obleas
Flanes
Dulces
Jaleas
Tortas
Alfajores
Biscochos
Bombones
Caramelos
Mermeladas

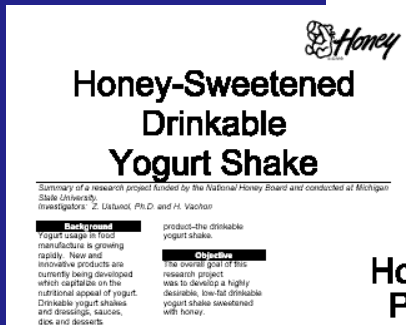
Pato - Pollo - Cerdo - Conejo - Novillo - Cordero - Pescado

Enfoque industrial




Honey

Honey in Chocolate Milk-Based Beverages


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. Ustunol, 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

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.


Honey

Honey Oil-Free Potato Chips

liminary findings of a research project funded by the National Honey Board and the California Polytechnic State University at San Luis Obispo.
H. Khalil, Ph.D.

ground
consequences associated with diets high in fat.

An oil-free potato chip was successfully developed at the Cal Poly Food Science and Nutrition Pilot Plant utilizing a novel process with the aid of microwave energy. The product attracted the attention of local media but consumer acceptance surveys indicated that color

enhance the chip's quality. Both liquid and dry honey were tested. Aside from the unique flavor of honey, its reducing sugars were expected to help initiate the Maillard browning reaction. This would compensate for the lack of color and flavor development which was a problem with the initial process. In the initial process, the product temperature did


Honey

Honey in Heat Processed and Fresh Salsas

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

Background
The number of salsas available on the U.S. market has increased dramatically over the past few years. In 1991, salsa became the leading U.S. condiment replacing the ever popular ketchup.[1] Honey is used widely in many condiments including mustards, barbecue sauces and dressings, yet only occasionally in salsa. However, a sweetened-salsa market is developing as some manufacturers have begun taking salsas beyond their tomato/spice roots.

Project objective
The objectives of this National Honey Board-sponsored research project were to:
1. study the desirability and feasibility of the addition of honey to heat-processed and fresh salsas,
2. determine optimum levels of honey, capsaicin (the naturally-occurring heat compound in hot peppers) and acidity in salsa,
3. test various optimized formulas with consumers,
4. understand the interactive effects of honey, heat and acidity on flavor and texture and
5. determine the shelf-life stability of salsa with added honey.

Experimental design
Part 1: Formula development. A response surface central composite design with three independent variables (five levels of honey, pH and heat) was used to develop 18 formula variations of salsa. The test design produced 14 products, three additional "control" products and a control with no added honey. Heat-processed and fresh salsa formulas were developed from commercially available products. Heat-processed salsa contained canned products, with the exception of fresh cilantro and frozen diced onions, and was cooked and canned. Fresh salsa was made with fresh ingredients and was not cooked. For both types of salsa, capsaicin was diluted and used to obtain varying levels of heat (burn intensity).


Honey

Honey in Non-Alcoholic Juice Beverages

mary of a research project funded by the National Honey Board and conducted at the ersity of Nebraska-Lincoln.
stigator: M.S. Preston

Background
rganic, organic, "all-ral", nutraceutical--these words often bring ess to products whose ns display them. In this of ever-growing reness of functional, ral foods, both honey and s are favorites among sumers interested in th

s, herbal drinks, fruit-ed drinks and sodas etened with honey are ving in popularity. In these -alcoholic beverages, ey serves as a ohydrate/high energy ce and provides flavor, etness, color and ntifier. However, the ital for combining honey botanical ingredients ains relatively untapped.

Objectives
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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.

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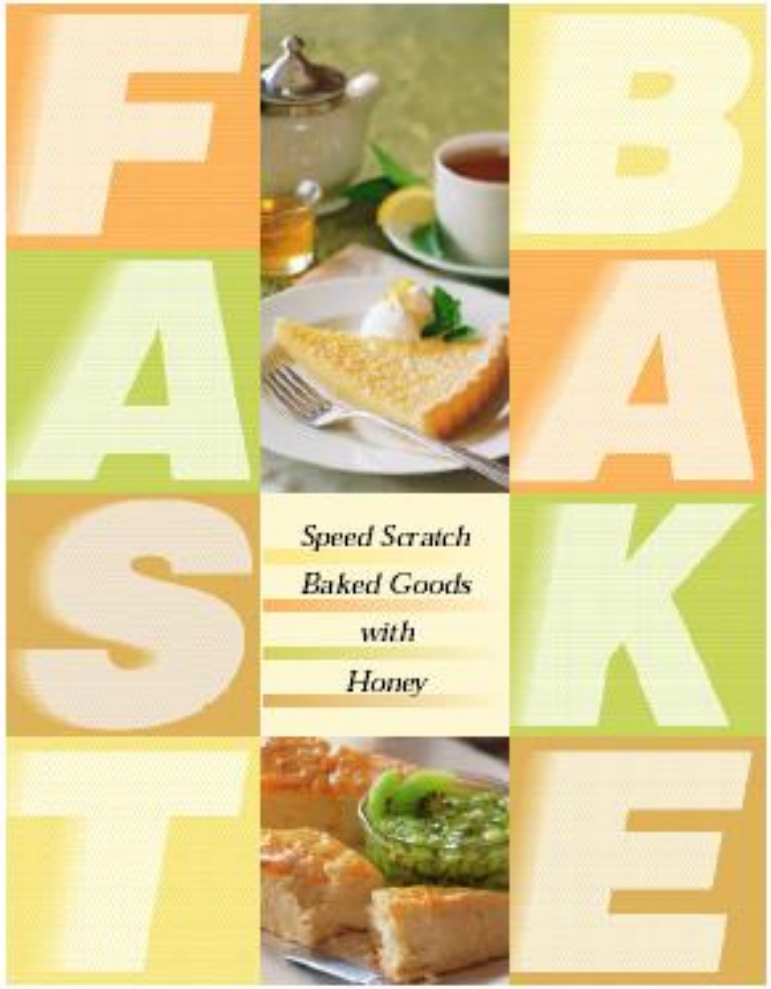


HONEY-LEMON TART

HONEY-PINEAPPLE FRENCH TOAST

HONEY-SWEETENED BREAKFAST CALZONES

HONEY-TOMATO FOCACCIA

HONEY-TOMATO SAVORY BREAD PUDDING

Secretaría de Agroindustria
Ministerio de Producción y Trabajo
Presidencia de la Nación

Enfoque industrial

Cera

Industria electrónica, textil, vidriera, papelera

Agricultura, injertos

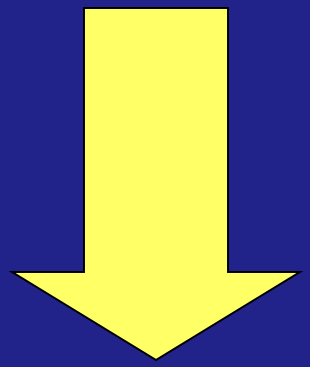
Medicina, bálsamos, ungüentos, supositorios, pomadas, emplastos

Cosmética cremas limpiadoras, astringentes, limpieza, lápiz labial

Alimentos. Chacinados, Golosinas

Enfoque industrial

Competitividad en producción primaria



Oportunidad en producción industrial