Yeasts

CHOOZIT™ yeasts are mainly derived from the species *Debaryomyces hansenii* and *Kluyveromyces lactis*. All yeasts are proposed in freeze-dried form.

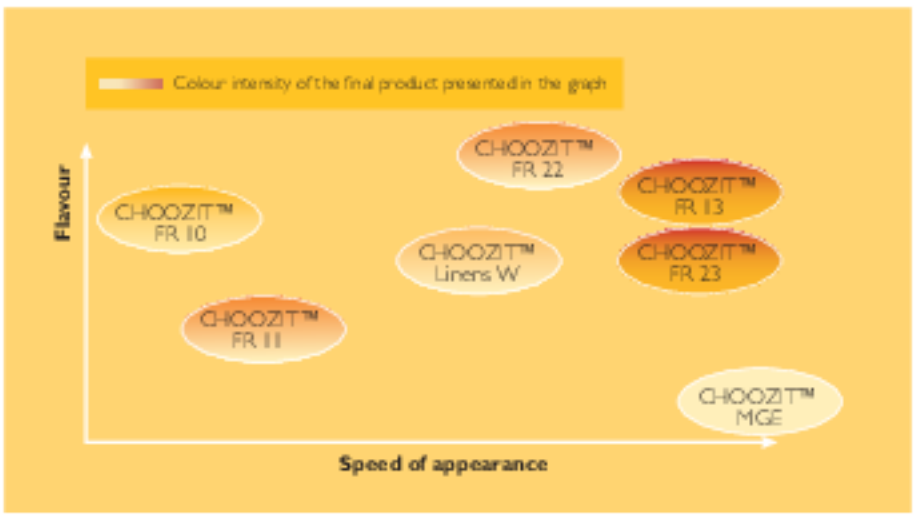
Products	Composition	Dosage (Doses/1,000L of milk)	Comments
CHOOZIT™ CUM	*Candida utilis*	1-4	Flavour in soft cheese
CHOOZIT™ KL71	*Kluyveromyces lactis*	1-4	Flavour in soft cheese and control of the hole formation
CHOOZIT™ DH	*Debaryomyces hansenii*	1-4	Neutralisation for mix and smeared cheese
CHOOZIT™ R2R	*Rhodosporidium infirmominiatum*	1-4	Flavour and coloration in mix and smeared cheese
CHOOZIT™ DHN	*Debaryomyces hansenii*	1-4	Neutralisation for mix and smeared cheese

Bacteria and blends

Brevibacterium linens and other corynebacteria are an important component of the so-called red-smear flora, which are commonly used in the production of cheeses such as Munster and Tilsitter. CHOOZIT™ *Brevibacteria* range is a unique palette of colours from bright red to cream-orange or neutral. The species used are *Brevibacterium linens*, *Brevibacterium casei*, *Arthrobacter sp.*

Products	Composition	Dosage (Doses/1,000L of milk)	Comments
Corynebacteria			
CHOOZIT™ FR 13	*Brevibacterium linens*	2-5	Very bright orange, aromatic potential, fast growth
CHOOZIT™ FR 23 = SR3	*Brevibacterium linens*	2-5	Very bright orange
CHOOZIT™ FR 22	*Brevibacterium linens*	2-5	Bright orange, high aromatic potential, fast growth
CHOOZIT™ FR 10 = LB	*Brevibacterium linens*	2-5	Ivory, high aromatic potential
CHOOZIT™ FR 11 = LR	*Brevibacterium linens*	2-5	Light orange, aromatic potential
CHOOZIT™ Linens W	*Brevibacterium linens*	20-50 g	Orange, aromatic potential, fast growth
CHOOZIT™ MGE	*Arthrobacter nicotianae*	1-3	Strong aminopeptidasic activity, very fast growth

Range positioning



Products	Composition	Comments
Micrococcaceae / Bacteria		
CHOOZIT™ MVA	*Staphylococcus xylosus*	Simulation of lactic culture, rapid development of texture and flavour
Blends		
CHOOZIT™ PLA	*Brevibacterium linens, Arthrobacter nicotianae, Debaryomyces hansenii, Geotrichum candidum*	Complex blend for aspect and flavour of the main European (or French) style cheeses
CHOOZIT™ OFR 9	*Brevibacterium casei, Brevibacterium linens, Debaryomyces hansenii, Candida utilis, Geotrichum candidum*	Aspect and flavour of all the surface ripening and smear cheese
CHOOZIT™ OFR 20	*Brevibacterium casei, Brevibacterium linens, Debaryomyces hansenii, Candida utilis*	To favour the coloration of the smear cheese

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DANISCO
First you add knowledge...

CHOOZIT™ Ripening Cultures

CHOOZIT™ Ripening Cultures from Danisco give cheese a taste of its true identity.

Comprising tailored moulds, yeasts and bacteria providing complementary aromatic activities, the range is an essential aid to attaining the exclusive taste, textural and structural characteristics that distinguish all cheese types.

For delicious cheese with a longer shelf life, CHOOZIT™ Ripening Cultures are the value-added choice.

DANISCO

First you add knowledge...

Benefits of using Danisco cultures

Product range	Impact in cheese processing
Penicillium candidum	Provides a customised appearance and flavour; extends shelf life on high MFFB*, protects against pollutants, provides a thin rind (no perception in mouth), produces flavours
Penicillium roqueforti	Provides a customised appearance and flavour; protects against pollutants, produces flavour
Geotrichum	Enables fine-tuning of cheese characteristics, complements the effect of penicillium, can be used alone for specialities
Yeast	Enables assimilation and/or fermentation of carbohydrates, produces flavour; provides neutralising power in combination with corynebacteria
Corynebacteria	Provides flavour and colours from cream to bright orange, possible association of corynebacteria/yeasts and geotrichum, produces sulphur flavours
Micrococacceae	Improves texture and flavour due to proteolytic potential, activates specific lactic bacteria, protects against pollutants

* *Moisture on Fat Free Bases*

Moulds

Moulds grow in the form of a cell unit, the so-called mycelium, and, with the help of enzymes, break down higher molecule compounds into smaller molecules they can exploit. Specific proteolysis and lipolysis of mould cultures result in the formation of characteristic flavours and influence the consistency of the cheese considerably.

Penicillium roqueforti

Penicillium roqueforti has a number of functions in the production of blue mould cheeses such as Roquefort, danish blue, Gorgonzola and Stilton.

The CHOOZIT™ *Penicillium roqueforti* range provides various colours from pale green to dark blue and enzymatic activities giving tastes ranging from very mild to sharp and piquant.

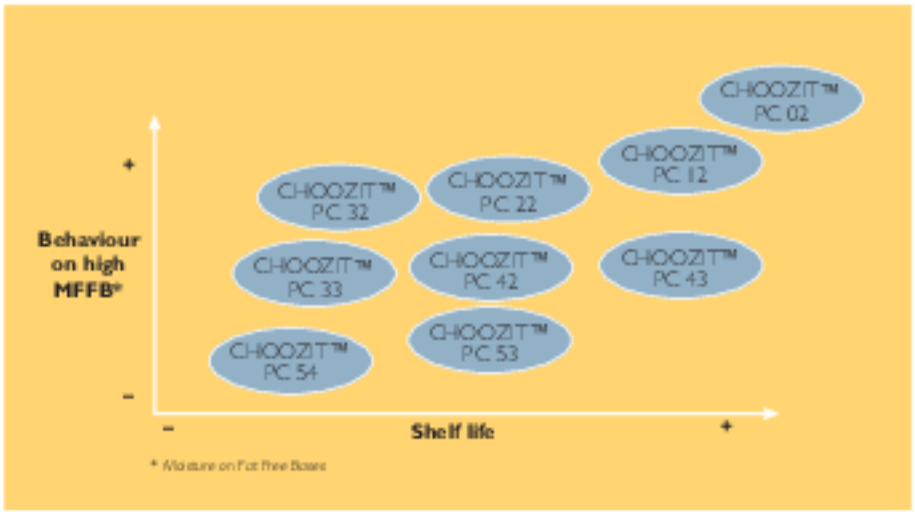
Culture	Growth rate	Flavour	Colour	Comments
CHOOZIT™ P. roqueforti CB2	Medium fast	Strong blue taste	Blue-green	Soft, more fatty cheese, creamy consistency, long shelf life. For soft higher fat level cheese, e.g. mild Gorgonzola, Edelpilz, and blue soft double mould-type cheese
CHOOZIT™ P. roqueforti PA	Very fast	Mild blue taste	Dark-green	Mild cheese, can be mixed with PV, long shelf life, e.g. danish blue and double mould-type cheese
CHOOZIT™ P. roqueforti PJ	Fast	Typical blue taste	Middle-green	Can be mixed with PV, no unbound moisture, long shelf life, e.g. Edelpilz or Roquefort
CHOOZIT™ P. roqueforti PV	Very fast	Strong blue taste	Bluish-green	Very creamy consistency, e.g. Edelpilz, Roquefort and strong Gorgonzola-type
CHOOZIT™ P. roqueforti WI	Very fast	Mild blue taste	Middle-green	Creamy consistency, no unbound moisture, long shelf life, e.g. Edelpilz, danish blue or Roquefort-type cheese
CHOOZIT™ P. roqueforti PS	Medium fast	Mild blue taste	Blue-green	Mould-type cheese, can be put in association with *P. candidum* PC 54/HP6

Penicillium candidum

P. candidum (or Penicillium camemberti) is used in the production of white mould cheeses such as Camembert and Brie, soft blue cheese types with white rind, and whey *(Sauermilch)* cheese.

Products	Existing format	Application	Minimum dosage (Doses/1,000L of milk)	Comments
Penicillium candidum				
CHOOZIT™ PC 02	Hyptonic	Ultra-filtrated and stabilised cheese	3-6	Long shelf life
CHOOZIT™ PC 12	Freeze-dried Hyptonic	Stabilised cheese	3-6	Long shelf life
CHOOZIT™ PC 22	Freeze-dried Hyptonic	Stabilised cheese	3-6	Long shelf life
CHOOZIT™ PC 42 = VS	Freeze-dried Hyptonic	Traditional cheese	2-5	Normal shelf life
CHOOZIT™ PC 33 = SAM3	Freeze-dried Hyptonic	Against mucor	6-10	Active against mucor but possibility to use every day
CHOOZIT™ PC 53 = NBGE	Freeze-dried Hyptonic	Stabilised and traditional cheese	2-5	Normal shelf life
CHOOZIT™ PC 54 =HP6	Freeze-dried Hyptonic	Stabilised and traditional cheese	2-5	Normal shelf life
CHOOZIT™ PC 32 = EDEN	Hyptonic	Traditional cheese		Normal shelf life
CHOOZIT™ PC 43 = ABL	Freeze-dried Hyptonic	Traditional cheese	2-5	Normal shelf life
Other moulds:Trichothecium domesticum (ssp. cylindrocarpon)				
CHOOZIT™ MYCODORE	Freeze-dried	Traditional cheese	1-2	Saint-Nectaire like aspect

Range positioning



Geotrichum candidum

Geotrichum candidum is a very common mould in the dairy industry with morphological features that vary from strain to strain, depending on cultivation conditions. Morphological types range from yeast-like (flat, white, yeast-like colonies) to mould-like (loose or tomentose mycelium of varying height). *Geotrichum candidum* cultures are used both alone and with *P. candidum* in the production of soft cheese such as Brie and Camembert.

Products	Existing format	Application	Minimum dosage (Doses/1,000L of milk)	Comments
Geotrichum candidum				
CHOOZIT™ Geo 2	Liquid form	All mould soft cheese	2-5	Association with PC
CHOOZIT™ Geo 13	Liquid form, Freeze-dried	Camembert, goat cheese	1-4	
CHOOZIT™ Geo 15	Liquid form, Freeze-dried	Mixed surface and goat cheese	1-4	pH-neutralisation for red bacteria development
CHOOZIT™ Geo 17	Liquid form, Freeze-dried	All mould soft cheese	2-5	Association with PC
CHOOZIT™ Geo 20	Liquid form	Mixed and smeared cheese	1-4	pH-neutralisation for red bacteria development
CHOOZIT™ Geo 25	Liquid form	Reblochon-like cheese	1-4	Provide traditional taste
CHOOZIT™ GCM 33	Liquid form	All surface white mould cheese	2-5	Association with PC

Due to its proteolytic and lipolytic activity, *Geotrichum candidum* plays a significant role in the ripening process and greatly influences cheese appearance, structure and flavour. In some applications, such as goat cheese, *Geotrichum candidum* is used alone to cover the surface.

In red-smear cheese, *Geotrichum candidum* helps neutralise the cheese surface and stimulates the development of desirable, acid-sensitive flora such as *Brevibacterium linens*. Working with *Brevibacterium linens*, it produces the red and white surface typical of some European-style cheeses.

Range positioning