



4yó

Special Yogurt Cultures

SHAPE THE TRENDY FLAVOUR FOR YOUR MARKET





COMPOSE YOUR PERSONAL SYMPHONY
OF FLAVOURS



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THE STORY OF A MYTH

Sacco System has a strong tradition and expertise in research, development, manufacturing and selling of lactic acid bacteria for yogurt, that find its roots as far back as 1948, when Dr. Luminir “Leo” Veseley, known as the father of the first Italian stirred creamy yogurt, decided to scientifically demonstrate the importance of lactic acid bacteria for the human body. Since then our R&D continues to develop new, natural products starting from a collection of more than 6,000 strains, many of which have probiotic properties.

The data presented in the following sections were collected during standardised laboratory acidification tests in 9% skim milk powder, heat treated at 90°C (194°F) for 20 min. Cultures were inoculated with 1UC for 100L of milk, and incubated at 43°C (109,4°F) temperature.

The content listed in this publication is our recommended selection of the 4yo' cultures range. For more information or customized blends, contact us at info@saccosystem.com.



A COMPLETE RANGE FOR YOGURT



BLEND	SET	STIRRED	STRAINED	DRINKING	DILUTED
Y050B	✓		✓		
Y052B	✓		✓		
Y056B	✓		✓		
Y078E	✓		✓		
Y078F*	✓		✓		
Y079E	✓		✓		
Y079F	✓		✓		
Y080E	✓		✓		
Y080F	✓		✓		
Y082E	✓		✓		
Y082F*	✓		✓		
Y086F*	✓		✓		
Y150B	✓		✓		
Y152B	✓		✓		
Y170F	✓		✓		
Y172F	✓		✓		
Y258A	✓	✓		✓	
Y259A	✓	✓		✓	
Y278F	✓	✓		✓	
Y279F	✓	✓		✓	
Y280F	✓	✓		✓	
Y330A	✓	✓		✓	
Y335A*		✓			
Y335E*		✓			
Y337A*		✓			
Y338E*		✓			
Y350A	✓	✓		✓	
Y350B	✓	✓		✓	
Y352A	✓	✓		✓	
Y352B	✓	✓		✓	
Y352E	✓	✓		✓	
Y357E	✓	✓		✓	
Y358E*		✓			
Y359A*		✓			
Y370E	✓	✓		✓	

The **4yo'** culture range is a series of highly concentrated food cultures specifically developed for thermophilic fermented milk applications. To match the broadest possible set of applications, the **4yo'** culture range allows you to create a trendy taste for your market, keeping the origi-

nality and diversity of your product, and helping you anticipate trends by shaping brand new yogurt varieties.

The **4yo'** yogurt cultures range is selected to inspire new trends whilst respecting the tradition and profiles of your products.

BLEND	SET	STIRRED	STRAINED	DRINKING	DILUTED
Y372E	✓	✓		✓	
Y380F*	✓	✓		✓	
Y382F	✓	✓		✓	
Y428A		✓			✓
Y429A		✓			✓
Y430A	✓	✓		✓	
Y430FSKP*		✓			
Y432A		✓			
Y436A		✓			✓
Y438A*		✓			✓
Y438B*		✓			✓
Y439A*		✓			✓
Y439B*		✓			✓
Y450A		✓			
Y450E	✓	✓		✓	
Y450B*		✓			
Y452A		✓			
Y452B	✓	✓		✓	
Y452E	✓	✓		✓	
Y456B*		✓			✓
Y458B*		✓			✓
Y458E		✓			✓
Y459B*		✓			✓
Y459E		✓			✓
Y470E		✓			✓
Y472E		✓			
Y476E		✓			✓
Y477D		✓			✓
Y480F		✓			✓
Y482F		✓			
Y486 F		✓			✓
YAB 450 AB		✓			
YAB 450 BB		✓			
YAB 452 BB		✓			
Y477D	✓	✓		✓	

* ALSO AVAILABLE ON CRYO

4yo SET YOGURT

Set yogurt is the original yogurt, for which fermentation occurs in the package, creating a firm texture. The coagulum is not broken until it is consumed.

Set yogurt can be made using different **4yo'** starter cultures depending on the desired final product characteristics, mainly gel firmness, mouth thickness, and fermentation speed.

BLEND	YOGURT FLAVOUR	MOUTH THICKNESS	GEL FIRMNESS	FERMENTATION TIME to pH 4,70±0,05	FERMENTATION TIME to pH 4,50±0,05	ACIDITY	POST ACIDIFICATION
Y050B	3	1	5	6h00	6h30	2	2
Y052B	3	1	5	6h00	6h30	2	2
Y056B	3	1	5	6h00	6h30	2	2
Y078E	4	1	5	4h00	5h00	3	3
Y078F	5	1	5	4h00	4h30	4	4
Y079E	4	1	5	3h30	5h00	3	3
Y079F	5	1	5	4h00	4h30	4	4
Y080E	4	1	5	6h00	6h30	3	3
Y080F	5	1	5	5h00	5h30	4	5
Y082E	4	1	5	6h00	6h30	3	3
Y082F	5	1	5	5h00	5h30	4	4
Y086F	5	1	5	5h00	5h30	4	4
Y150B	3	2	4	5h30	6h30	2	2
Y152B	3	2	4	6h00	7h00	2	2
Y170F	5	2	4	5h00	5h30	4	4
Y172F	5	2	4	5h00	5h30	4	4
Y258A	2	3	4	4h30	5h30	2	2
Y259A	1	2	4	4h30	5h30	2	2
Y278F	5	3	4	4h00	4h30	4	3
Y279F	5	3	4	4h00	4h30	4	3
Y280F	4	2	2	5h00	5h30	2	4
Y330A	3	3	2	6h30	8h00	2	2
Y350A	2	3	4	5h30	6h30	2	2
Y350B	3	3	3	6h00	7h00	2	2
Y352A	2	3	4	5h30	6h30	2	2
Y352B	3	3	4	6h00	7h00	2	2
Y352E	4	3	2	5h30	6h30	2	3
Y356B	3	3	2	5h30	7h00	3	3
Y357E	4	3	2	5h30	6h30	2	3
Y358E	4	3	2	4h30	5h30	2	3
Y370E	4	3	2	6h00	6h00	2	4
Y372E	4	2	2	6h00	6h00	4	3
Y380F	5	3	4	5h15	6h00	4	4
Y382F	5	2	4	6h00	6h30	4	4
Y430A	3	3	1	6h30	8h00	2	2
Y452B	3	3	1	6h30	7h00	2	3
Y450E	4	3	1	5h00	5h30	2	3
Y452E	4	3	1	5h30	6h30	2	3
Y477D	4	3	1	5h00	6h00	2	3

LEGEND

YOGURT FLAVOUR: 1 very mild but milky, 2 mild, 3 medium, 4 high, 5 very high, traditional

MOUTH THICKNESS: 1 no added, 2 low, 3 medium, 4 high, 5 very high

GEL FIRMNESS: 2 low, 3 medium, 4 high, 5 very high

ACIDITY: 1 very low, 2 low, 3 medium, 4 high, 5 very high

POST ACIDIFICATION: 1 extra low, 2 low, 3 relatively low, 4 high

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4yo STIRRED YOGURT

BLEND	YOGURT FLAVOUR	MOUTH THICKNESS	GEL FIRMNESS	FERMENTATION TIME to pH 4,50±0,05	ACIDITY	POST ACIDIFICATION	PROBIOTIC
Y258A	2	3	4	5h30	2	2	-
Y259A	1	2	4	5h30	2	2	-
Y278F	5	3	4	4h30	4	3	-
Y279F	5	3	4	4h30	4	3	-
Y280F	4	2	2	5h30	2	4	-
Y330A	3	3	2	8h00	2	2	-
Y335E	4	3	4	5h00	2	2	-
Y338E	4	4	3	5h00	3	2	-
Y350A	2	3	4	6h30	2	2	-
Y350B	3	3	3	7h00	2	2	-
Y352A	2	3	4	6h30	2	2	-
Y352B	3	3	4	7h00	2	2	-
Y352E	4	3	2	6h30	2	3	-
Y356B	3	3	2	7h00	3	3	-
Y357E	4	3	2	6h30	2	3	-
Y358E	4	3	2	5h30	2	3	-
Y359A	2	2	4	5h00	2	2	-
Y370E	4	3	2	6h00	2	4	-
Y372E	4	2	2	6h00	4	3	-
Y380F	5	3	4	6h00	4	4	-
Y382F	5	2	4	6h30	4	4	-
Y428A	2	5	3	5h30	1	1	-
Y429A	1	4	3	5h30	1	1	-
Y430A	3	3	1	8h00	2	2	-
Y430F SKP*	4	3	4	5h30	2	3	-
Y432A	2	3	3	8h30	2	1	-
Y436A	1	4	4	6h30	2	1	-
Y438A	2	4	3	6h30	1	1	-
Y438B	2	5	3	5h00	1	1	-
Y439A	2	4	3	6h30	1	2	-
Y439B	2	4	3	6h00	1	1	-
Y450A	2	3	3	5h30	2	2	-

* SUPER KOSHER FOR PASSOVER

Stirred yogurt is the most common type of yogurt today, typically consumed with a spoon. It is fermented in tanks at the dairy, where it is stirred to get a smooth, homogeneous but still viscous appearance.

Stirred yogurt can be made using different **4yo'** starter cultures depending on the flavor, mouth thickness and fermentation time to shape the desired final product characteristics.

BLEND	YOGURT FLAVOUR	MOUTH THICKNESS	GEL FIRMNESS	FERMENTATION TIME to pH 4,50±0,05	ACIDITY	POST ACIDIFICATION	PROBIOTIC
Y450B	3	3	3	7h00	2	2	-
Y450E	4	3	1	5h30	2	3	-
Y452A	2	3	3	6h00	2	2	-
Y452B	3	3	1	7h00	2	3	-
Y452E	4	3	1	6h30	2	3	-
Y456B	3	3	4	6h30	3	3	-
Y458B	2	5	3	6h00	2	3	-
Y458E	3	4	3	5h30	3	3	-
Y459B	2	5	3	6h00	2	2	-
Y459E	4	4	3	5h30	3	3	-
Y470E	4	4	3	6h00	3	3	-
Y472E	4	2	3	6h00	4	3	-
Y477D	4	3	1	6h00	2	3	-
Y480F	5	4	3	5h30	4	4	-
Y482F	5	2	3	6h00	4	4	-
YAB 450 AB	3	3	3	5h30	2	2	✓
YAB 450 BB	3	3	3	7h00	2	2	✓
YAB 452 BB	3	2	3	7h00	2	2	✓

LEGEND

YOGURT FLAVOUR: 1 very mild but milky, 2 mild, 3 medium, 4 high, 5 very high, traditional
MOUTH THICKNESS: 1 no added, 2 low, 3 medium, 4 high, 5 very high
GEL FIRMNESS: 2 low, 3 medium, 4 high, 5 very high
ACIDITY: 1 very low, 2 low, 3 medium, 4 high, 5 very high
POST ACIDIFICATION: 1 extra low, 2 low, 3 relatively low, 4 high

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4yo STRAINED YOGURT

Strained yogurts or concentrated yogurt is a more viscous and often creamier, but still smooth and homogeneous type of yogurt with a distinctive slightly tangy taste, consumed with a spoon or used in cooking. It is also called concentrated yogurt, and in some countries is marketed as Greek or Greek-style yogurt.

Strained yogurts can be made using different **4yo'** starter cultures depending on the desired final product characteristics.



BLEND	YOGURT FLAVOUR	MOUTH THICKNESS	GEL FIRMNESS	FERMENTATION TIME to pH 4,50±0,05	ACIDITY	POST ACIDIFICATION
Y050B	3	1	5	6h30	2	2
Y052B	3	1	5	6h30	2	2
Y056B	3	1	5	6h30	2	2
Y078E	4	1	5	5h00	3	3
Y079E	4	1	5	5h00	3	3
Y078F	5	1	5	4h30	4	4
Y079F	5	1	5	4h30	4	4
Y080E	4	1	5	6h30	3	3
Y082E	4	1	5	6h30	3	3
Y080F	5	1	5	5h30	4	5
Y082F	5	1	5	5h30	4	5
Y086F	5	1	5	5h30	4	5
Y150B	3	2	4	6h30	2	2
Y152B	3	2	4	7h00	2	2
Y170F	5	2	4	5h30	4	4
Y172F	5	2	4	5h30	4	4
Y078E	4	1	5	5h00	3	3
Y079E	4	1	5	5h00	3	3
Y078F	5	1	5	4h30	4	4
Y079F	5	1	5	4h30	4	4
Y080E	4	1	5	6h30	3	3
Y082E	4	1	5	6h30	3	3
Y080F	5	1	5	5h30	4	5
Y082F	5	1	5	5h30	4	5
Y086F	5	1	5	5h30	4	5
Y150B	3	2	4	6h30	2	2
Y152B	3	2	4	7h00	2	2
Y170F	5	2	4	5h30	4	4
Y172F	5	2	4	5h30	4	4

LEGEND

YOGURT FLAVOUR: 1 very mild but milky, 2 mild, 3 medium, 4 high, 5 very high, traditional

MOUTH THICKNESS: 1 no added, 2 low, 3 medium, 4 high, 5 very high

GEL FIRMNESS: 2 low, 3 medium, 4 high, 5 very high

ACIDITY: 1 very low, 2 low, 3 medium, 4 high, 5 very high

POST ACIDIFICATION: 1 extra low, 2 low, 3 relatively low, 4 high

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4^{yó} DRINKING YOGURT

The **drinking yogurt** is essentially a stirred yogurt with a lower viscosity for ease of drinking, also suitable for consumption “on the go”.

Drinking yogurt can be made using different **4yo'** starter cultures depending on the flavor, mouth thickness and fermentation time to shape the desired final product characteristics.



BLEND	YOGURT FLAVOUR	MOUTH THICKNESS	GEL FIRMNESS	FERMENTATION TIME to pH 4,50±0,05	ACIDITY	POST ACIDIFICATION
Y258A	2	3	4	5h30	2	2
Y259A	1	2	4	5h30	2	2
Y278F	5	3	4	4h30	4	3
Y279F	5	3	4	4h30	4	3
Y280F	4	2	2	5h30	2	4
Y330A	3	3	2	8h00	2	2
Y350A	2	3	4	6h30	2	2
Y350B	3	3	3	7h00	2	2
Y352A	2	3	4	6h30	2	2
Y352E	4	3	2	6h30	2	3
Y352B	3	3	4	7h00	2	2
Y356B	3	3	2	7h00	3	3
Y357E	4	3	2	6h30	2	3
Y358E	4	3	2	5h30	2	3
Y370E	4	3	2	6h00	2	4
Y372E	4	2	2	6h00	4	3
Y380F	5	3	4	6h00	4	4
Y382F	5	2	4	6h30	4	4
Y430A	3	3	1	8h00	2	2
Y450E	4	3	1	5h30	2	3
Y452B	3	3	1	7h00	2	3
Y452E	4	3	1	6h30	2	3
Y477D	4	3	1	6h00	2	3

LEGEND

YOGURT FLAVOUR: 1 very mild but milky, 2 mild, 3 medium, 4 high, 5 very high, traditional

MOUTH THICKNESS: 1 no added, 2 low, 3 medium, 4 high, 5 very high

GEL FIRMNESS: 2 low, 3 medium, 4 high, 5 very high

ACIDITY: 1 very low, 2 low, 3 medium, 4 high, 5 very high

POST ACIDIFICATION: 1 extra low, 2 low, 3 relatively low, 4 high

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4yo DILUTED YOGURT



Diluted yogurt is a dairy product produced by the addition of water or whey, before or after fermentation to standardize the total solid content of the final product, with pH correction if needed.

Diluted yogurt can be made using different **4yo'** starter cultures depending on the desired final product characteristics.

BLEND	YOGURT FLAVOUR	MOUTH THICKNESS	GEL FIRMNESS	FERMENTATION TIME to pH 4,50±0,05	ACIDITY	POST ACIDIFICATION
Y428A	1	5	3	5h30	1	1
Y429A	1	4	3	5h30	1	1
Y436A	1	4	4	6h30	2	1
Y438A	2	4	3	6h30	1	1
Y438B	2	5	3	5h00	1	1
Y439A	2	4	3	6h30	1	2
Y439B	2	4	3	6h00	1	1
Y456B	3	3	4	6h30	3	3
Y458B	2	5	3	6h00	2	3
Y458E	3	4	3	5h30	3	3
Y459B	2	5	3	6h00	2	2
Y459E	4	4	3	5h30	3	3
Y470E	4	4	3	6h00	3	3
Y476 E	3	4	1	6h00	3	3
Y477 D	3	4	1	6h00	3	3
Y480 F	4	4	1	5h30	4	4
Y486 F	4	4	1	6h00	4	4

LEGEND

YOGURT FLAVOUR: 1 very mild but milky, 2 mild, 3 medium, 4 high, 5 very high, traditional
MOUTH THICKNESS: 1 no added, 2 low, 3 medium, 4 high, 5 very high
GEL FIRMNESS: 2 low, 3 medium, 4 high, 5 very high
ACIDITY: 1 very low, 2 low, 3 medium, 4 high, 5 very high
POST ACIDIFICATION: 1 extra low, 2 low, 3 relatively low, 4 high

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OUR COMBO SOLUTION 4PROTECTION & PROBIOTIC BENEFITS

4PROTECTION, THE NATURAL GUARD FOR YOUR PRODUCT IDENTITY

4Protection Special Protective Food Cultures range help to control and preserve the final product from alterations, fighting in a completely natural way any possible undesirable microorganisms and thereby maintaining a “clean label” product.

4Protection Special Protective Food Cultures add an extra hurdle to prevent the growth of unwanted microorganisms, protecting the final product quality and food safety and help reduce food waste.

PROBIOTIC ADDITION FOR YOGURT AND FERMENTED MILK STARTER CULTURES

Following the new trend and need of a healthier and balanced diet, **probiotics** can be the perfect solution for a functional product that will help consumers to enjoy a better and happier lifestyle.

Our probiotic range for dairy:

- ***Lactobacillus rhamnosus CRL 1505***, ideal for gut health and for the treatment of upper respiratory tract infections in preschool children;
- ***Lactobacillus rhamnosus SP1***, optimal in reducing the caries increment in preschool children and normalising skin and improving appearance of acne in adults.



ABOUT SACCO

SACCO IS AN INTERNATIONAL COMPANY WITH FAMILY SPIRIT THAT OFFERS A WIDE RANGE OF INNOVATIVE PRODUCTS.

This includes starter cultures for food fermentation (in particular dairy) and nutritional supplements (probiotic cultures), as well as instruments for the improvement of food. The sister company **Caglificio Clerici** has been an Italian leader in rennet production since 1872.

Sacco furthermore acquired the Italian culture producer **CSL** in 2013. The high quality of our products, the continuous innovation, the ability to work closely with our clients, and the focus on training and developing employees, are the pillars of Sacco.

In recent years the company has further invested extensively in R&D, including brand new facilities in 2018 and 2019, and has been a “pioneer” in areas such as protective cultures.

Sacco distributes its products in all key markets (110+ countries), and has ISO 22000 and FSSC 22000 accreditation and a GMP certified plant.

Sacco is a company of Sacco System, the biotech network applied in food, nutraceutical and the pharmaceutical industry.

Find out more about our **4yo'** range and customized solutions.

Visit us at www.saccosystem.com or email us at info@saccosystem.com.

SACCO system

Supporting food culture & life



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