PROBIOTICS: YOUR GUT FEELING

What is Yakult?

Yakult is a fermented milk drink containing our unique probiotic bacteria, the *Lacticaseibacillus paracasei* Shirota (LcS) strain.

Yakult's Probiotic

Yakult contains the probiotic *Lacticaseibacillus paracasei* Shirota (LcS) strain. Each bottle contains 6.5 billion of the live LcS strain. The bacteria was named after Dr Minoru Shirota who discovered it in 1930. Previously known as *Lactobacillus casei* Shirota strain, new developments have enabled scientists to reclassify bacteria into more specific groups, hence the name change.

Yakult's Health Claims & FSANZ

Food Standards Australia New Zealand (FSANZ) is a statutory authority in Australia established in 2002. FSANZ is responsible for creating food standards for Australia and New Zealand. They ensure a safe food supply to protect the health and safety of consumers.

The LcS strain in Yakult has been supported with evidence of benefit through the 85 years of clinical research. In 2021, Yakult Australia notified FSANZ of a self-substantiated food-health relationship as required to make a general level health claim in Australia. A systematic review was conducted which looked at a number of research papers involving the LcS strain delivered as a fermented milk drink. An external review was conducted by La Trobe University to prevent bias and ensure a high-quality review. In November 2021, Yakult Australia had this claim approved by FSANZ.

The overall conclusion allowed for three health benefits to be approved which states that the LcS strain can survive to reach the intestines alive, where it positively alters the bacteria in the gut and improves stool condition.

Yakult's packaging also includes a gluten free claim, which is a nutrient content claim.

General level health claim:

The relationship between a nutrient or a substance and its effect on health.

High level health claim:

The relationship between a nutrient or a substance and its effect on a serious disease or a biomarker of a serious disease.

The LcS strain is unique to Yakult. This is because the strain and its manufacturing process is held 'commercial in confidence'. The benefits of probiotics are strain specific. As every probiotic is different, it is best to check with individual manufacturers and brands when comparing products.Yakult is made fresh in Melbourne, Australia using mainly local ingredients.

Food Industry Food Recall Protocol (the Protocol)

The Protocol established by FSANZ guides the food industry in developing a food recall plan and recalling food in Australia. Following this guideline ensures that food businesses can effectively meet the primary objectives of a food recall.

The primary objectives of a food recall are to:

- Stop the distribution and sale of the product as soon as possible
- Inform the government, the food businesses that have received the recalled product, and the public (consumer recalls only), of the food safety issue
- Effectively and efficiently remove unsafe product from the marketplace
- Appropriately dispose of, or rectify the food safety issue with the recalled product

Food Recall Process

Each food business must have its own written food recall process in the event of a food recall where an unsafe product must be removed from the food supply chain. Yakult has its own food recall plan which is regularly updated to ensure efficient removal of our product if need be. Mock recalls are carried out at regular intervals to ensure the reliability of the food recall plan and to make changes where necessary. Yakult prides itself on quality. There have not been any major food recalls at Yakult since we opened our doors in 1994.

The stages of the food recall process are:

1. Identifying, notifying and assessing a food safety issue
2. Deciding to recall or withdraw food
3. Identifying distribution of affected product(s)
4. Notifying government, business-stakeholders and consumers of a recall
5. Retrieving and disposing of food
6. Monitoring the recall's effectiveness
7. Closing the recall
8. Post-recall reporting

Food Withdrawal

Unlike a food recall, a food withdrawal is actioned when there is no food safety risk. Instead, it relates to the quality, ethical or suitability issues of the product. This includes the colour of the product or if it contains less than its declared weight. It may also be done if a food safety risk is yet to be confirmed. Once confirmed, the product must be recalled.

Waste Management & Recycling

- 99% of Yakult's raw ingredients end up in the bottle, leaving no by-products.
- Recycling of packaging materials take place where it is economically and environmentally viable:
  - Bottles can be collected for recycling and crushed. They can be mixed with other resin to create repurposed products, such as chairs and tables.

Labelling

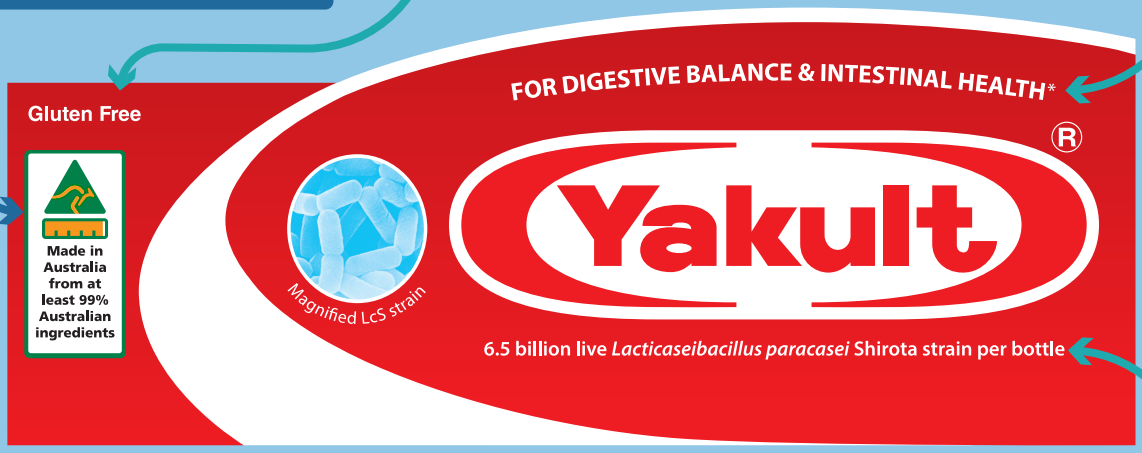
Food labelling is a crucial aspect of food packaging as it plays a significant role in conveying essential information to consumers. There are several regulatory bodies such as FSANZ who govern the food laws and authorities such as the Australian Competition and Consumer Commission (ACCC) who enforce those laws.

Compulsory Optional

Country of Origin
Schedule 2
Australian Consumer Law
(ACL)

Nutrition content claim
(1.2.7-11 to 1.2.7 - 13)
FSANZ

General Level Health Claim
(1.2.7-17 to 1.2.7-20)
FSANZ



Storage Information
(1.2.6)
FSANZ

Measurement marking on outer package
Division 4.4
National Trade Measurement Regulations
2009

Nutrition Content Claim
(1.2.8 - 4)
FSANZ

Nutrition Information Panel
(1.2.8)
FSANZ

Name and Address of Supplier
(1.2.2 - 4)
FSANZ

Statement of Ingredients
(1.2.4)
Mandatory Statements
(1.2.3)
FSANZ

Dietary Context Statement
(1.2.7 – 20)
FSANZ

Additional Information:

Lot Identification (1.2.2 – 3)
Although Yakult does not require a lot identification, it has been included on the bottles as part of our quality control procedures.

Comparative claims (1.2.7 – 16)
Yakult LIGHT has 40% less calories compared to Yakult Original.

What Lives Inside the Intestines?

The human microbiota located in the small intestine of the gastrointestinal tract has trillions of bacteria that inhibit the body.

The diverse bacteria in the intestines play important roles in the health of the human body. The microbiota has been linked to intestinal health, mental health, human behaviour and most importantly, the immune system. It regulates the immune response, preventing infection and immune-related disorders.

There are both beneficial and potentially harmful bacteria in the intestines. If there is an increase of more harmful bacteria, it can cause an imbalance known as dysbiosis. Factors such as a poor diet, stress and antibiotics can lead to dysbiosis. Symptoms include diarrhoea, abdominal pain, and inflammation.

Maintaining a diverse and balanced intestinal microbiota through a healthy lifestyle, including a varied diet rich in fibre and fermented foods, can help promote the growth of beneficial bacteria and keep potentially harmful bacteria in check.

How Can Diet Influence the Intestines?

The food we consume can directly impact the diversity and balance of bacteria in our intestines, which in turn affects our overall intestinal health. Nutrient-dense foods can support a healthy intestinal microbiota as they are rich in vitamins, minerals, fibre and antioxidants required to maintain a healthy intestinal lining and create diversity amongst beneficial bacteria. Nutrient-dense foods often contain anti-inflammatory compounds, such as omega-3 fatty acids and polyphenols. These compounds can help reduce intestinal inflammation, which is essential for a healthy digestive system.

Probiotics & Prebiotics

Beneficial bacteria, also known as probiotics, are live microorganisms that, when consumed in adequate amounts, confer health benefits to the host. They can strengthen existing good bacteria in the intestines to help maintain a healthy, balanced, and diverse gut microbiota. Probiotics are found in certain foods and beverages or dietary supplements including Yakult, yoghurt and kefir.

Prebiotics are the food source for probiotics. They act as fuel, allowing probiotics to grow and carry out their beneficial effects. Fruits, vegetables and legumes contain fibre which acts as a prebiotic, serving as food for beneficial bacteria in the intestinal tract.

Quality Assurance (QA)

At Yakult, food safety during the manufacturing process is highly important. Procedures are documented and followed to ensure the product is not subject to any hazards that might compromise its safety. To uphold the highest standards of safety, we implement the Hazard Analysis Critical Control Point (HACCP) system.

HACCP

- Identifies potential risks at every point of manufacture
- Prevents and controls potential risks
- Implements corrective action
- Monitors all processes

There are 7 principles of HACCP

1. **Conduct a hazard analysis**
   - Identify all potential hazards that may occur during production. These hazards may be physical, chemical or biological.
2. **Determine the Critical Control Points (CCPs)**
   - Determine where control points can be applied and are essential to prevent, eliminate or reduce an identified hazard to an acceptable level.
3. **Establish critical limits**
   - Set measurable standards for each CCP.
4. **Monitor Critical Control Points**
   - Establish regular or scheduled monitoring of each CCP.
5. **Corrective action**
   - Actions to be taken when monitoring indicates that a CCP is not under control.
6. **Verification of HACCP plan**
   - Confirms that the HACCP system is working effectively and as planned.
7. **Documentation and record keeping**
   - Keeping all information regarding procedures and reports appropriate to HACCP. Documentations are audited by external auditors every year.

Quality Control (QC)

QC activities involve sampling, testing and inspection of the product. Individual bottles are regularly inspected along the production line to ensure the highest quality, accuracy of labelling and secure packaging. Samples are sent to the laboratory where more than 100 tests are conducted for every batch of Yakult. Extensive sampling and testing throughout all stages of the manufacturing process to enable Yakult to ensure:

- Production of consistently high-quality products
- Absence of contaminating bacteria
- Presence of probiotic bacteria – at least 6.5 billion live LcS strain up to the use by date when stored correctly.

Yakult

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