

WHAT IS PERKii?

PERKii is a refreshing fruit flavoured probiotic drink currently available in five natural flavours. Unlike many probiotic drinks, we've been able to craft our little bottles of goodness with billions of **LIVING & PROTECTED** probiotics, in a low sugar, low calorie and gluten free offering.

Some people are happy with knowing just that. However others (like us) prefer to know the geeky bits and the sciencey stuff. If that's you, read on...

PATENTED PROGEL TECHNOLOGY

The ProGel technology was conceived in 2001 at The University of Queensland by globally recognised expert in food engineering, Professor Bhesh Bhandari. Core to this technology is the ability to produce micron-sized gel particles (microgels) to encapsulate ingredients. ProGel microgels come from sodium alginate, a naturally occurring biopolymer extracted from (brown) seaweed that is commonly used in food. This technology can provide protection for bioactive like probiotics as well as controlling delivery of pharmaceuticals and masking bitter tastes.

AN IDEAL ORAL DELIVERY SYSTEM FOR PROBIOTICS

In the ProGel probiotic microgels, the exposure of probiotic cells to the acidic conditions of the stomach is limited by the presence of the alginate shell. In acidic conditions, the alginate outer shell shrinks and an insoluble barrier is formed. In the lower intestine and colon, where pH conditions are basic, the ProGel microgel disintegrates and releases the probiotic cells.

The protective effects of alginate encapsulation is represented in the graph below. This shows a particular *Lacidophilus* strain that is completely killed within 1-2 hours in simulated stomach conditions, whereas the survivability of the same probiotic strain encapsulated in alginate are significantly improved.

The other benefit of alginate microgels is they are mucoadhesive so they attached to the intestinal mucosa, which may increase the rate and amount of colonisation.

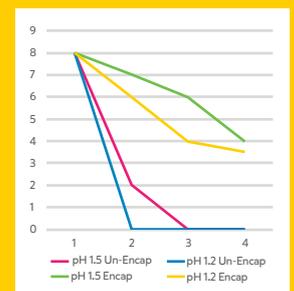
HOW IS PERKii MANUFACTURED?

The ProGel microgels and PERKii beverages are manufactured at a food grade facility situated in Brisbane, Queensland and Mudgee, NSW in accordance with HACCP procedures including strict guidelines for quality assurance.

PERKii is tested at the Progel R&D facilities based at the School of Agriculture and Food Sciences at The University of Queensland, and distributed across the east coast of Australia.



IMAGE 1.0
Close up view showing probiotic cells encapsulated with microgel particles.



GRAPH 1.0
Exposure to simulated gastric conditions (over 3hrs)

THE NUTRITIONAL STUFF

WHAT'S IN PERKii?

The PERKii Probiotics are formulated to have low sugar content, billions of protected Lactobacillus Lc341 probiotics, and 26 calories per 300 mL serving.

The sugar content of PERKii primarily comes from a cloudy apple juice that is used as a base solution (15% content). No additional sugars are added into the formulation. The sweetness of the beverage is slightly boosted by adding stevia, a plant-derived natural sugar replacement.

LACTOBACILLUS CASEI

THE PROOF IS IN THE PUDDING

The Lactobacillus strain has been extensively studied and is among one of the best documented probiotics. Potential benefits of LC431 include enhanced immune response after vaccination, and reduction in the duration and prevention of unsettled stomach and gastro disorders in children. It has also been linked to shortening the duration of the common cold and influenza-like illness and promoting healthy gut flora in infants.



NUTRITIONAL INFORMATION

Servings per package: 1 Serving size: 300ML

AVERAGE QTY	PER SERVING	PER 100ML
Energy	109 kJ	36 kJ
Protein	less than 1 g	less than 1 g
- Gluten	not detectable	not detectable
Fat - Total	less than 1 g	less than 1 g
- Saturated	less than 1 g	less than 1 g
Carbohydrate	6.4 g	2.1 g
- Sugars	6.4 g	2.1 g
- Lactose	not detectable	not detectable
- Galactose	not detectable	not detectable
Sodium	less than 5 mg	less than 5 mg
Lactobacillus casei	minimum 1 000 000 000 cfu* (at bottling)	minimum 333 000 000 cfu* (at bottling)

*CFU: "COLONY FORMING UNITS"

Comparison of PERKii to current dairy-based probiotic drinks

	Vaalia Yogurt Smoothie	Yakult Light	PERKii
Sugar (g/100g/ml serving)	12.3	10.9	2.1
Calories (g/100g/ml serving)	80	37	9
Lactose	Yes	Yes	No
Shelf life	4 weeks	45 days	4 months

PERKii FAQ

Q: WHY IS MILK A PRODUCT LISTED IN OUR INGREDIENTS?

A: Our probiotic cultures are grown in the presence of milk proteins (mainly whey and caseinate proteins). Although this protein is only used in the cultivation stages, there is still a small chance it could appear in minuscule amounts in the finished product.

Q: WHAT KIND OF APPLE JUICE IS USED IN PERKii?

A: We use a high quality cloudy apple concentrate from New Zealand that contains no added preservative, acid regulator, sugar, colouring or flavours.

Q: WHY IS STEVIA USED?

A: To avoid adding sugar and to keep the calories low, we use stevia, a natural sweetener from the stevia plant, to boost the flavour profile.

Q: WHAT PLASTIC IS USED FOR THE PACKAGING AND WHO BOTTLES IT?

A: Bottles are PET and bottled by Bevco in the NSW country town of Mudgee.

Q: WHAT IS THE PH BALANCE OF PERKii?

A: 3.5-3.7

Q: ARE THERE PRESERVATIVES IN PERKii?

A: Potassium sorbate is used in incredibly low levels in a bottle of PERKii (0.0004g/L). The potassium sorbate used is a preventative antimicrobial that is there to extend and support the product through the entire shelf life of 120 days. WHO/FAO recommends that the acceptable daily intake for humans is 0-25 mg/kg body weight. At the very low level found in a bottle of PERKii, the human body is able to metabolise this very rapidly.

Q: WHAT IS POTASSIUM SORBATE?

A: First discovered in berries of the mountain ash tree, potassium sorbate is a variation of sorbic acid, a polyunsaturated fat. It was discovered that these berries were very high in antioxidants and Vitamin C and contained sorbic acid (sorbate) which was effective as an antimicrobial in food to stop the growth and spread of harmful bacteria and molds. The sorbate we use (Preservative E202) is a synthesised version of the sorbic acid found in these berries.