



Functional Performer MPC for Clean Label Beverages

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CLEAN LABEL
CONFERENCE



Ingredients by



Dairy for life

Who We Are

We are dedicated to producing consistently high quality and safe dairy goodness for customers and their consumers around the world



Fonterra & NZMP

Fonterra is a dairy co-operative owned by ~10,500 New Zealand farming families.

NZMP is Fonterra's business-to-business dairy ingredients brand.

NZMP dairy ingredients are trusted right from our farms, through manufacturing and distribution all over the world.



Our Passion

Sustainability is at the heart of what we do each day, ensuring dairy nutrition plays its part in a sustainable food system.

In New Zealand, we farm the way nature intended, with our cows grazing on lush pastures.

New Zealand's natural environment with fertile soil, moderate temperatures and excellent rainfall, as well as abundant sunshine is ideal for growing grass.



Global Presence

~140 Countries served

~22,000 People employed globally

50+ Manufacturing sites worldwide

400 Scientists in our world class research centre to enable our leading innovation development

16bn Litres (4.5bn Ga) of milk processed annually

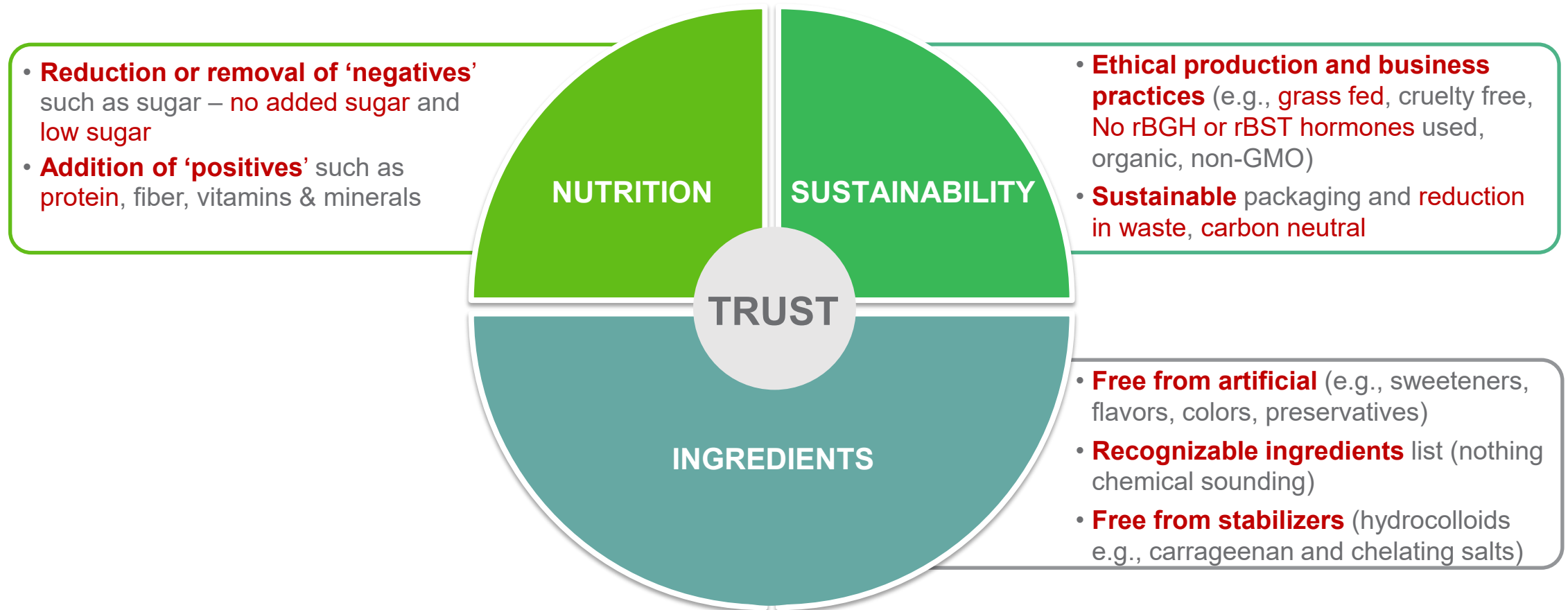
95% Of our milk is exported

Clean label* is a consumer driven trend centered on trust



Consumers believe they can trust clean label products, expecting them to be less processed, with simpler ingredients making them good for them and good for the planet

Wholesomeness and transparency are key values for clean label consumers, and while each will define their clean label needs differently, common expectations may include:



*There is no formal definition from what is considered "Clean Label"



FUNCTIONAL PERFORMER MPC

A new functional MPC to enable new claims to differentiate in the bustling ready to drink protein beverage market:

- Clean label
- Higher protein levels
- Simplified formulation

Today's protein beverages have complex ingredient statements to ensure stability



30g protein vanilla shake example: 17 ingredients*

Water, Milk Protein Concentrate, Calcium Caseinate, Contains less than 1% of High Oleic Sunflower Oil, Natural and Artificial flavors, Inulin, Cellulose Gel and Cellulose Gum, Salt, Sucralose, Acesulfame Potassium, Carrageenan, Tripotassium Phosphate, Dipotassium Phosphate, Sodium Hexametaphosphate, Magnesium Phosphate, Sodium Ascorbate.

30g protein vanilla shake example: 10 ingredients

Water, Milk Protein Concentrate. Contains Less Than 1% Of The Following: Sunflower Oil, Natural Flavors, Sunflower Lecithin, Salt, Sodium Polyphosphate, Trisodium Phosphate, Gellan Gum, Sucralose

Clean** 20g protein vanilla shake example: 18 Ingredients:

Filtered water, Grass-Fed Milk Protein Concentrate, Organic Agave, Natural Flavors, Organic High Oleic Sunflower Oil, Vegetable Glycerine, Cellulose, Sunflower Lecithin, Sodium Polyphosphate, Magnesium Polyphosphate, Potassium Citrate, Tricalcium Phosphate, Potassium Chloride, Sea Salt, Gellan Gum, Monk Fruit Extract, Organic Stevia Extract, Organic Locust Bean Gum

Today's protein beverages have complex ingredient statements to ensure stability



30g protein vanilla shake example: 17 ingredients*

Water, Milk Protein Concentrate, ~~Calcium Caseinate~~, Contains less than 1% of High Oleic Sunflower Oil, Natural and Artificial flavors, ~~Inulin, Cellulose Gel and Cellulose Gum, Salt, Sucralose, Acesulfame Potassium, Carrageenan, Tripotassium Phosphate, Dipotassium Phosphate, Sodium Hexametaphosphate, Magnesium Phosphate, Sodium Ascorbate.~~

30g protein vanilla shake example: 10 ingredients

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Filtered water, Grass-Fed Milk Protein Concentrate, Organic Agave, Natural Flavors, Organic High Oleic Sunflower Oil, ~~Vegetable Glycerine, Cellulose, Sunflower Lecithin, Sodium Polyphosphate, Magnesium Polyphosphate, Potassium Citrate, Tricalcium Phosphate, Potassium Chloride, Sea Salt, Gellan Gum, Monk Fruit Extract, Organic Stevia Extract, Organic Locust Bean Gum~~

**Functional
Performer MPC**
offers
**simplification like
never before:**

5 ingredients:
Water, Milk Protein
Concentrate, Sunflower
Oil, Natural Flavor,
Natural Sweetener



Functional Performer MPC Enables:

Clean Label: Functional Performer MPC enables removal of unnatural sounding stabilizers to make ingredient labels much simpler and recognizable

Higher Protein: More nutrition with less – up to 12% protein means less water, less packaging and denser nutrition

Simplified Formulating: Stabilizing beverages is tricky, without the need product development is easier

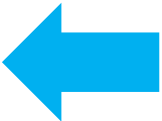


Functional Performer MPC has proven stability to 12 months at 9% and at 12% protein without stabilizers



Key modes of RTD quality failure are sedimentation and viscosity building/ gelation; chemical sounding stabilizers such as hydrocolloids and chelating salts are typically required to control this

Nutrition Facts	
1 servings per container	
Serving size	1 Bottle (330ml)
Amount Per Serving	
Calories	160
% Daily Value*	
Total Fat 2.5g	3%
Saturated Fat 0.3g	2%
Trans Fat 0g	
Polyunsaturated Fat 0g	
Monounsaturated Fat 0g	
Cholesterol 0mg	0%
Sodium 180mg	8%
Total Carbohydrate 3g	1%
Dietary Fiber 1g	4%
Total Sugars 2g	
Includes 0g Added Sugars	0%
Sugar Alcohol 0g	
Protein 30g	60%
Vitamin D 0mcg	0%
Calcium 710mg	50%
Iron 0.165mg	0%
Potassium 116mg	2%
<small>*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.</small>	



Ingredients 30g/9% Protein:
Water, Milk Protein Concentrate,
Canola Oil, Natural Flavor, Natural
Sweetener

Ingredients 40g/12% Protein:
Water, Milk Protein Concentrate,
Canola Oil, Natural Flavor, Sweetener

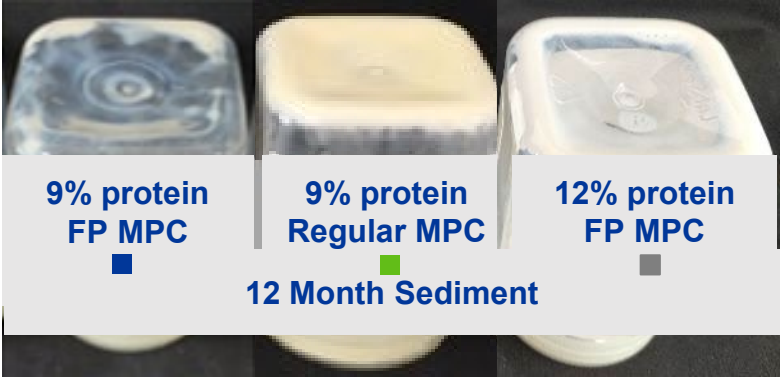
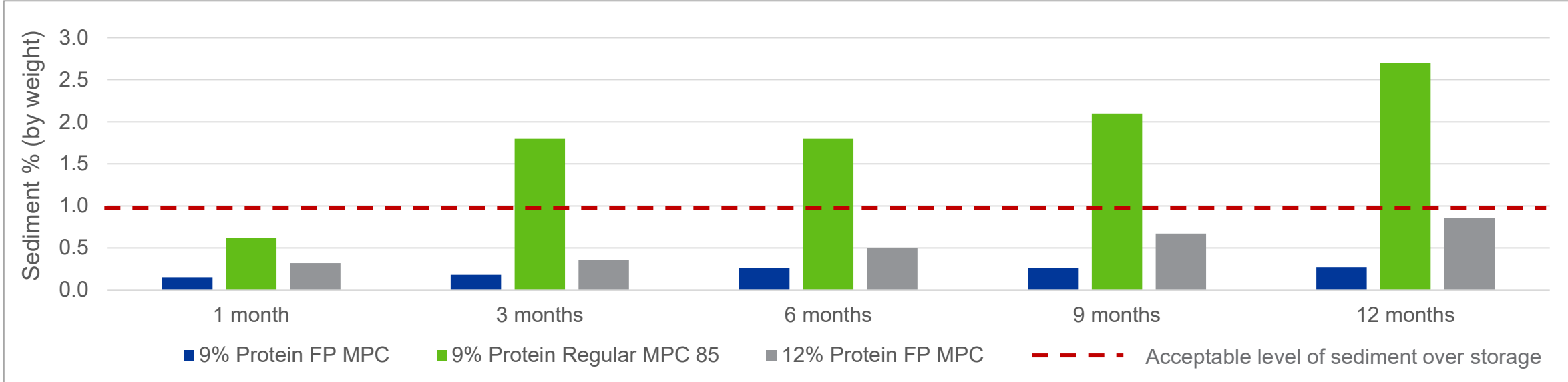


Nutrition Facts	
1 servings per container	
Serving size	1 Bottle (330ml)
Amount Per Serving	
Calories	200
% Daily Value*	
Total Fat 2.5g	3%
Saturated Fat 0.5g	3%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 250mg	11%
Total Carbohydrate 2g	1%
Dietary Fiber 0g	0%
Total Sugars 2g	
Includes 0g Added Sugars	0%
Sugar Alcohol 0g	
Protein 40g	80%
Vitamin D 0mcg	0%
Calcium 940mg	70%
Iron 0.198mg	2%
Potassium 165mg	4%
<small>*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.</small>	

Functional Performer MPC RTD shows minimal sedimentation on storage at 9% and 12% protein to 12 months



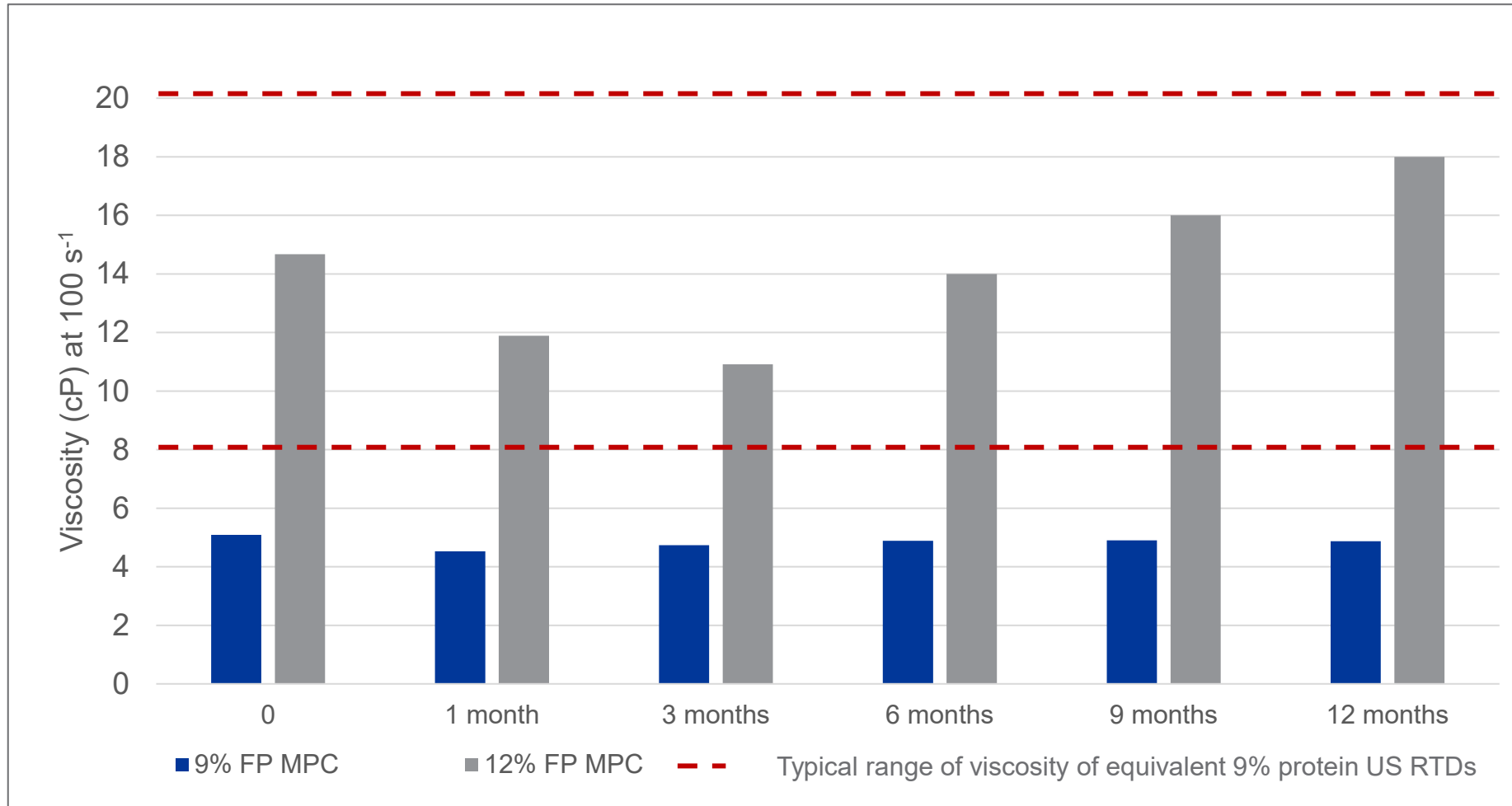
Standard MPC 85 ingredients (e.g., NZMP MPC 4850) show unacceptable levels of sediment during storage unless a chelator or stabilizer is used, making the clean label proposition impossible with them



Functional Performer MPC has proven viscosity stability over 12 months without stabilizers for 9% and 12% protein



No abnormalities in viscosities were observed indicating no risk of gelation failure across shelf life



Simply Protein: Protein Shake

A truly clean protein for the conscious consumer

A deliciously smooth high protein clean label shake featuring 30g of premium grass-fed milk protein per serve

Simple Ingredients List: water, milk protein concentrate, sunflower oil, natural flavor, natural sweetener

Why so simple?

Because good nutrition should be easy



The Proposition:

- ✓ **High protein:** 30g quality milk protein per 11 Fl. Oz serving
- ✓ **Quality grass-fed milk protein:** to support muscle repair & recovery, satiety and lean body mass
- ✓ **Low sugar:** 2g or less of natural milk sugar and no added sugar
- ✓ **Free-from:** hydrocolloids such as carrageenan, cellulose gel, cellulose gum and gellan gum
- ✓ **Free-from:** chemical sounding calcium chelators such as dipotassium phosphate, tripotassium phosphate and sodium hexametaphosphate

OUR PROTEIN INGREDIENT:

NZMP Functional Performer MPC

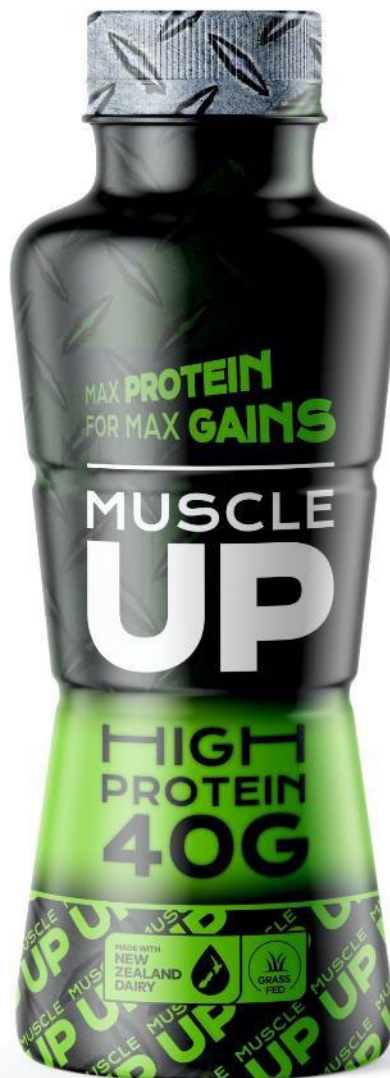
Muscle UP Performance Shake

Maximum protein for maximum gains

A smooth and delicious, super high protein milky shake that is easy to down to keep your muscles in great shape

Sweet and simple ingredients list: water, milk protein concentrate, sunflower oil, natural flavor, natural sweetener

When you need the best fuel,
Don't settle for less.



The Proposition:

- ✓ **High Protein:** 40g quality grass-fed milk protein per 11 Fl. Oz to support muscle repair & recovery
- ✓ **Branched chain amino acid rich:** 7.2g of BCAAs and 3.8g of leucine per 11 Fl. Oz serve
- ✓ **Low sugar:** 2g or less of natural milk sugar and no added sugar
- ✓ **Free-from:** hydrocolloids such as carrageenan, cellulose gel, cellulose gum and gellan gum
- ✓ **Free-from:** chemical sounding calcium chelators such as dipotassium phosphate, tripotassium phosphate and sodium hexametaphosphate

OUR PROTEIN INGREDIENT:

NZMP Functional Performer MPC

Pro-Packed: High Protein Shake

More protein nutrition into less volume

The next generation of milky protein shakes - highly concentrated but still smooth and delicious, making meaningful protein dosages easier to consume

Less volume helps you and the planet by using less packaging and less water while maintaining protein packed clean label nutrition

Sometimes less really is more



The Proposition:

- ✓ **Concentrated protein:** up to 12.5% allows more in a bottle, or a smaller volume for easier consumption
- ✓ **Quality grass-fed milk protein:** to support muscle repair & recovery, satiety and lean body mass
- ✓ **Low sugar:** 2g or less of natural milk sugar and no added sugar
- ✓ **Free-from:** hydrocolloids such as carrageenan, cellulose gel, cellulose gum and gellan gum
- ✓ **Free-from:** chemical sounding calcium chelators such as dipotassium phosphate, tripotassium phosphate and sodium hexametaphosphate

OUR PROTEIN INGREDIENT:

NZMP Functional Performer MPC



Functional Performer MPC offers opportunity for clean label differentiation – how could you leverage it?



TECHNOLOGY & EXPERTISE

Fonterra's Functional Performer MPC technology, paired with our technical expertise provides a unique opportunity for your brand to differentiate and grow share within the RTD category.

We can enable a premium sustainably sourced high protein shake with a very simple ingredient list to target natural retailers and a new consumer segment.



PARTNERING TO ACCELERATE INNOVATION

Fonterra can work with you collaboratively, leveraging our technical expertise and ingredient technology to speed your time to market.



THANK YOU

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