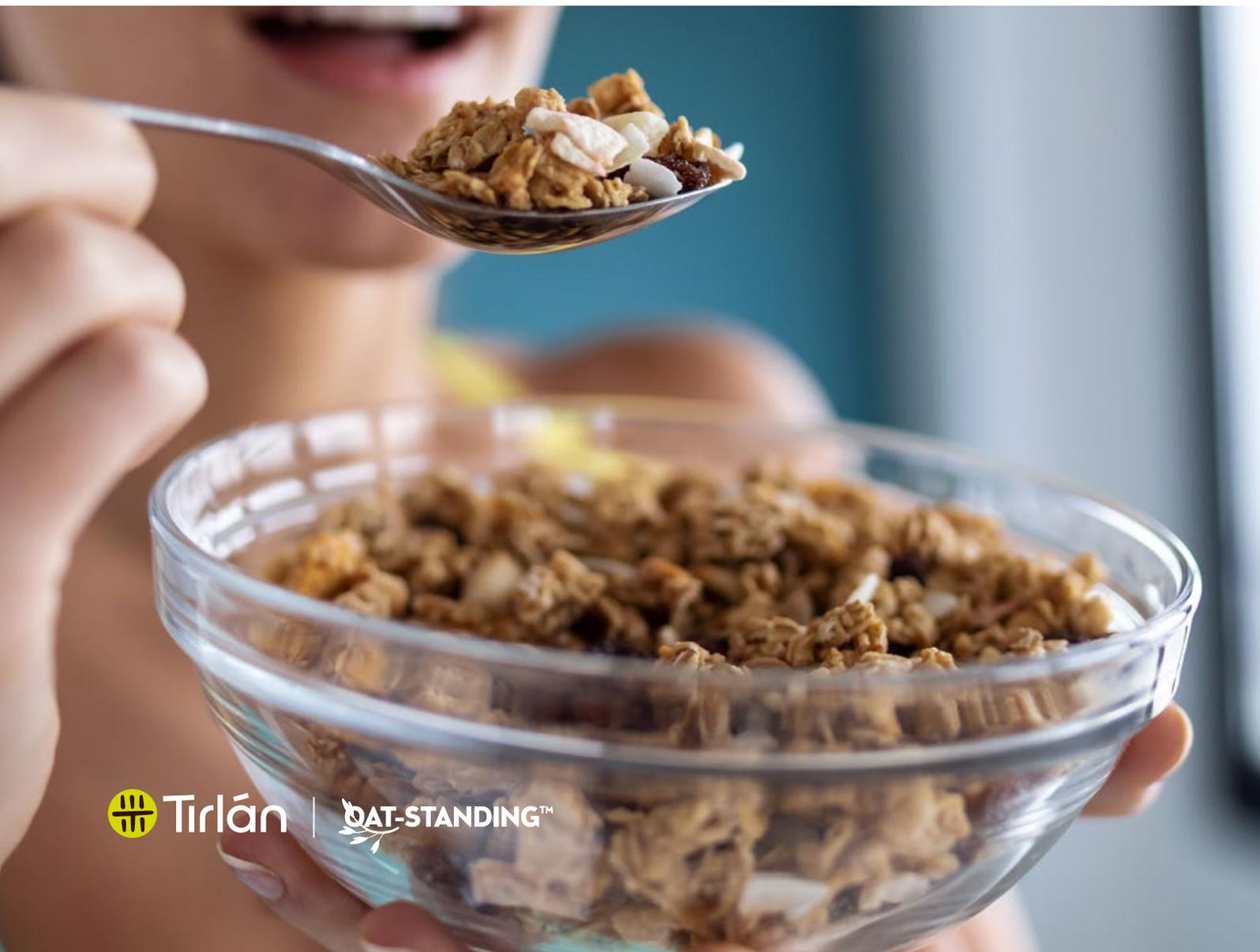


OATS IN APPLICATION



OUR PRODUCT PORTFOLIO

Tirlán has an extensive range of oat flakes and flours.

Sourced from Irish family farms, we take great care to guarantee the highest quality of oats - conventional, organic, and gluten-free.

Oats are an excellent source of nutrition and are one of the most promising raw materials for preparation of functional plant-based food or beverage.

Our oat ingredients are boosted by a sustainable and natural positioning that reflects consumer demands.

Our extensive range of oat flakes and flours can be used in a range of solutions and applications to deliver great-tasting, highly functional and nutritious products.

- **Oats are nutritious and healthy**
- **Oats contain on average between 11-13% protein¹.**
- **They are high in soluble fibres, especially β -glucan, which helps to lower blood cholesterol².**
- **Naturally low in sugar, salt and saturated fats.**
- **Oats contain a range of minerals such as calcium, iron, magnesium, and zinc.**
- **Suitable for vegans & vegetarians.**



OAT-STANDING™

OAT PORTFOLIO

Oats

Available in Conventional, Organic, and Gluten Free



Groats



Steel Cut Oats



Shredded Oats



Jumbo Oat Flakes



Quick Cook Oat Flakes

Speciality Oat Ingredients



Oat-Standing™
Gluten Free Oat
Flour 550



Oat-Standing™
Gluten Free Oat
Flour 270



Oat-Standing™
Gluten Free
Functional Oat
Flour LV



Organic
Oat-Standing™
Functional Oat
Flour LV



Oat-Standing™
Gluten Free
Liquid Oat Base

DAIRY ALTERNATIVE CHOCOLATE

Our Oat-Standing™ Functional Oat Flour can help you deliver a range of dairy alternative chocolates.

Key Ingredient

Oat-Standing™ Functional Oat Flour LV



Key Characteristics of Oat-Standing™ Ingredients in Dairy Alternative Chocolate



TASTE

Oat-Standing™ Functional Oat Flour LV provides a neutral taste allowing you to achieve the flavour of your choice.



EASE OF USE

Oat-Standing™ Functional Oat Flour LV is easy to incorporate into typical dairy alternative chocolate recipes and can be used in standard chocolate manufacturing equipment.



HEALTH

Oat-Standing™ Functional Oat Flour LV is rich in dietary fibre and beta glucans.*

*Based on per 100g of oats



TEXTURE

Chocolate 'snap' is related to achieving the proper chocolate temper in high quality chocolate. Dairy Alternative Chocolate made with our Oat-Standing™ Functional Oat Flour LV gives a good 'snap', meeting consumer expectations.



PARTICLE SIZE

To produce an even, extremely smooth texture, in which no grit can be detected on one's tongue or palate, chocolate mixture should be refined to particle size $Dv90 < 30\mu\text{m}$. Our Oat-Standing™ Functional Oat Flour LV performs similar to whole milk powder for particle size.



MELTING STRUCTURE

Dairy Alternative Chocolate made with our Oat-Standing™ Functional Oat Flour LV has a good melting structure.



COUVERTURE

Oat-Standing™ Functional Oat Flour LV is also suitable for Dairy Alternative Chocolate Couverture applications such as enrobing, dipping, and drizzling.

DAIRY ALTERNATIVE ICE CREAM

Our Oat-Standing™ range of Oat Flours and Liquid can help you deliver a range of ice creams and frozen desserts.

Key Ingredient

Oat-Standing™ Functional Oat Flour LV

Oat-Standing™ Liquid Oat Base



Key Characteristics of Oat-Standing™ Ingredients in Dairy Alternative Ice Cream:



TASTE

Oat-Standing™ Functional Oat Flour LV provides a neutral oaty taste allowing you to achieve the flavour of your choice.

Oat-Standing™ Liquid Oat Base provides a neutral oaty taste with a pleasant, sweet flavour in the finished product.



EASE OF USE

Oat-Standing™ Functional Oat Flour LV and Oat-Standing™ Liquid Oat Base are easy to incorporate into typical Dairy Alternative Ice Cream recipes. Depending on whether your manufacturing equipment favours a liquid or dry process, you can choose which ingredient is suitable for you.



HEALTH

Oat-Standing™ Functional Oat Flour LV is rich in dietary fibre and beta glucans.*

*Based on per 100g of oats



TEXTURE

Tirlán's Oat-Standing™ Functional Oat Flour LV and Liquid Oat Base deliver different viscosity profiles over a range of addition rates supporting optimum texture formation in the finished product. Dairy Alternative Ice Cream made with Oat-Standing™ Functional Oat Flour LV has firm

textural properties, maintaining the thick, creamy consistency in the tub and a desirable sensory experience for the consumer.



MIX STABILITY

Stabilisers are often employed in ice cream manufacture to ensure superior structural and textural properties, however, their presence can result in phase separation occurring. Oat-Standing™ Functional Oat Flour LV show excellent emulsion stability characteristics with minimal stabiliser addition.



OVERRUN

Overrun is the percent of ice cream expansion attained from the amount of air incorporated in the product during the freezing process. Ice cream overrun affects smoothness, consistency & taste of the product, therefore affecting your profitability. By using Oat-Standing™ Functional Oat Flour LV, you can achieve at least 40% overrun rendering it suitable for multiple product ranges from luxurious and indulgent, to a more economical product.



MELT

Dairy Alternative Ice Cream made with Oat-Standing™ Functional Oat Flour LV shows good resistance to melt over time.

DAIRY ALTERNATIVE YOGHURT

Our Oat-Standing™ Functional Oat Flour can help you deliver a range of yoghurt and fermented solutions.

Key Ingredient

Oat-Standing™ Functional Oat Flour LV



Key Characteristics of Oat-Standing™ Ingredients in Dairy Alternative Yoghurt:



TASTE

Oat-Standing™ Functional Oat Flour LV provides a neutral oaty taste allowing you to achieve the flavour of your choice.



HEALTH

Oat-Standing™ Functional Oat Flour LV is rich in dietary fibre and beta glucans.*

*Based on per 100g of oats



EASE OF USE

Oat-Standing™ Functional Oat Flour LV is easy to incorporate into typical dairy alternative yoghurt recipes.



TEXTURE

Oat-Standing™ Functional Oat Flour LV provides a firm texture in dairy alternative yoghurt applications.

DAIRY ALTERNATIVE CREAM CHEESE

Our Oat-Standing™ Functional Oat Flours can help you deliver a range of dairy alternative cheese styles.

Key Ingredient

Oat-Standing™ Functional Oat Flour LV



Key Characteristics of Oat-Standing™ Ingredients in Dairy Alternative Cream Cheese:



TASTE

Oat-Standing™ Functional Oat Flour LV provides a neutral oaty taste allowing you to achieve the flavour of your choice.



EASE OF USE

Oat-Standing™ Functional Oat Flour LV is easy to incorporate into typical soft/processed cheese recipes and can be used in processed cheese industrial manufacturing equipment.



HEALTH

Oat-Standing™ Functional Oat Flour LV is rich in dietary fibre and beta glucans.*

*Based on per 100g of oats



TEXTURE

Dairy Alternative Cream Cheese made with Oat-Standing™ Functional Oat Flour LV has a “creamy”, “rounded” and “luxurious” texture.



SPREADABILITY

Dairy Alternative Cream Cheese made with Oat-Standing™ Functional Oat Flour LV matches the spreadability of a dairy cream cheese.



SYNERESIS

Syneresis is the separation of the whey liquid from the gel matrix, visible on the surface of cream cheese. Dairy alternative cream cheese produced with our Oat-Standing™ Functional Oat Flour LV did not have any syneresis post centrifugation.

READY-TO-DRINK BEVERAGES

Our Oat-Standing™ Functional Oat Flour and Liquid Oat Base can help you deliver a range of ready-to-drink beverages.

Key Ingredient

Oat-Standing™ Functional Oat Flour LV

Oat-Standing™ Liquid Oat Base



SPORTS
NUTRITION



DAIRY
ALTERNATIVE

Key Characteristics of Oat-Standing™ Ingredients in RTD Beverages:



TASTE

Oat-Standing™ Functional Oat Flour LV provides a neutral oaty taste allowing you to achieve the flavour of your choice.

Oat-Standing™ Liquid Oat Base provides a neutral oaty taste with a pleasant, sweet flavour in the finished beverage.



EASE OF USE

Oat-Standing™ Functional Oat Flour LV and Oat-Standing™ Liquid Oat Base are easy to incorporate into typical RTD beverage recipes. Depending on whether your manufacturing equipment favours a liquid or dry process, you can choose which ingredient is suitable for you.



TEXTURE

Oat-Standing™ Functional Oat Flour LV and Oat-Standing™ Liquid Oat Base both provide a silky-smooth mouthfeel in RTD beverages. Oat-Standing™ Functional Oat Flour LV will leave little sedimentation while Oat-Standing™ Liquid Oat Base is fully soluble, resulting in no sedimentation.



VISCOSITY

Oat-Standing™ Functional Oat Flour LV is heat stable, remaining fluid and pourable through Ultra-High Temperature processing (UHT) and retort.



HEALTH

Oat-Standing™ Functional Oat Flour LV is rich in dietary fibre and beta glucans.*

*Based on per 100g of oats



ACIDITY

Oat-Standing™ Functional Oat Flour LV can be used in a beverage with a low pH making it an ideal ingredient to combine with fruit juices.

READY-TO-MIX BEVERAGES

Our Oat-Standing™ Oat Flour 270 can help you deliver ready to mix beverage solutions in a variety of flavours.

Key Ingredient

Oat-Standing™ Oat Flour 270



Key Characteristics of Oat-Standing™ Ingredients in RTM Beverages:



TASTE

Oat-Standing™ Oat Flour 270 provides a neutral taste allowing you to achieve the flavour of your choice, e.g., strawberry, chocolate, vanilla.



EASE OF USE

Oat-Standing™ Oat Flour 270 is easy to incorporate into typical RTM beverage recipes and can be used in standard industrial manufacturing equipment.

The Oat-Standing™ Oat Flour 270 displays excellent rehydration properties, mixing with cold water easily when shaken by hand.



TEXTURE

Oat-Standing™ Oat Flour 270 provides a smooth mouthfeel in RTM beverages.



HYBRID

In combination with Promiko WPI, Oat-Standing™ Oat Flour 270 provides a full nutritional offering.



HEALTH

Oat-Standing™ Oat Flour 270 is rich in dietary fibre and beta glucans.*

*Based on per 100g of oats

OAT BARS

Our Oat-Standing™ range of oat flours and flakes can help you deliver a range of bar solutions.

Key Ingredient

Oat-Standing™ Jumbo Oat Flakes

Oat-Standing™ Quick Cook Oat Flakes

Oat-Standing™ Oat Flour 270

Oat-Standing™ Oat Flour 550



Key Characteristics of Oat-Standing™ Ingredients in Oat Bars:



BETTER FOR YOU

Our Oat-Standing™ Oat Flours and Flakes can be used in High Fibre and Reduced Sugar Bar applications.



TASTE

Oat-Standing™ Oat Flour 270 provides a neutral taste allowing you to achieve the flavour of your choice, e.g., strawberry, chocolate, vanilla.



APPEARANCE

Our Oat-Standing™ Oat Flakes maintain their integrity remaining visible in the bar and provide a nice golden colour.



EASE OF USE

Our Oat-Standing™ Oat Flours and Flakes are easy to incorporate into typical bar recipes. Tirlán can offer bespoke flake sizes to suit your manufacturing needs.



DOUGH FORMATION

Oat-Standing™ Oat Flour 270 offers an improved dough formation over coarser oat flours.

Oat-Standing™ Oat Flour 270 has a small particle size and good oil holding capacity forming a slightly wetter paste which results in a moister product.

OAT COOKIES

Our Oat-Standing™ range of oat flours and flakes can help you deliver a range of biscuit solutions.

Key Ingredient

Oat-Standing™ Jumbo Oat Flakes

Oat-Standing™ Quick Cook Oat Flakes

Oat-Standing™ Oat Flour 270

Oat-Standing™ Oat Flour 550



Key Characteristics of Oat-Standing™ Ingredients in Cookies:



BETTER FOR YOU

Our Oat-Standing™ Oat Flours and Flakes can be used in Source of Fibre cookie applications.



TASTE

Our Oat-Standing™ Oat Flours and Flakes provides a balanced, sweet, pleasant taste. The neutral taste of oats allows you to incorporate a flavour of your choice.

The flavour of oat is enhanced on heating. During the baking of the cookies amino acids and reducing sugars react together forming a roasted, nutty-like oat flavour.



APPEARANCE

Our Oat-Standing™ Jumbo Oat Flakes maintain their integrity remaining visible in the cookie and provide a nice golden colour.



EASE OF USE

Our Oat-Standing™ Oat Flours and Flakes are easy to incorporate into typical cookie recipes and can be used in standard manufacturing equipment. Tirlán can offer bespoke flake sizes to suit your manufacturing needs.



TEXTURE

The Oat-Standing™ Oat Cookie sample recipe has a good hardness.



WATER ACTIVITY

The Oat-Standing™ Oat Cookie sample recipe has a low water activity of 0.34.

Water activity is the measure of water which may participate in reactions, and which is available for micro-organisms. It is used to predict food stability and safety.



STRUCTURE

The starch content of Oat-Standing™ Oat Flour 270 and Oat Flour 550 is approximately 64.5g. The starch maintains the structure and prevents the dough from spreading during baking.

EXTRUDED SNACKS

Our Oat-Standing™ range of oat flours can help you deliver a range of snack solutions.

Key Ingredient

Oat-Standing™ Oat Flour 550

Oat-Standing™ Oat Flour 270



Key Characteristics of Oat-Standing™ Ingredients in Extruded Snacks:



BETTER FOR YOU

Our Oat-Standing™ Oat Flours are rich in dietary fibre and beta glucans and can be used in Source of Fibre and Low-Fat extruded snack applications.



TASTE

Our Oat-Standing™ Oat Flours provides a neutral, clean, and mild oaty taste allowing you to achieve the flavour of your choice.



APPEARANCE

Our Oat-Standing™ Jumbo Oat Flakes maintain their integrity remaining visible in the cookie and provide a nice golden colour.



EASE OF USE

Our Oat-Standing™ Oat Flours are easy to incorporate into typical extruded snack recipes and can be used in standard manufacturing equipment.



EXPANSION

The average expansion of the Oat-Standing™ Extruded Snack recipe was 14.8mm.



DENSITY

The density of the Oat-Standing™ Extruded Snack recipe is 37.6g per litre.



TEXTURE

Extruded snacks made with our Oat-Standing™ Oat Flour 550 and Oat Flour 270 produce a crispy oat snack.

PANCAKE MIX

Our Oat-Standing™ range of oat flours can help you deliver nutritional pancake mixes.

Key Ingredient

Oat-Standing™ Oat Flour 550

Oat-Standing™ Oat Flour 710



**SPORTS
NUTRITION**



**SNACKS
& BAKERY**

Key Characteristics of Oat-Standing™ Ingredients in Pancake Mix



TASTE

Oat-Standing™ Oat Flours provides a neutral oaty taste allowing you to achieve the flavour of your choice.



EASE OF USE

Oat-Standing™ Oat Flours are easy to incorporate into typical Pancake mix recipes.



TEXTURE

Oat-Standing™ Oat Flours are available in different particle sizes, from super fine flours to courser flours, allowing up to achieve the texture of your choice.



HEALTH

Oat-Standing™ Oat Flours are rich in dietary fibre and beta glucans.*

*Based on per 100g of oats

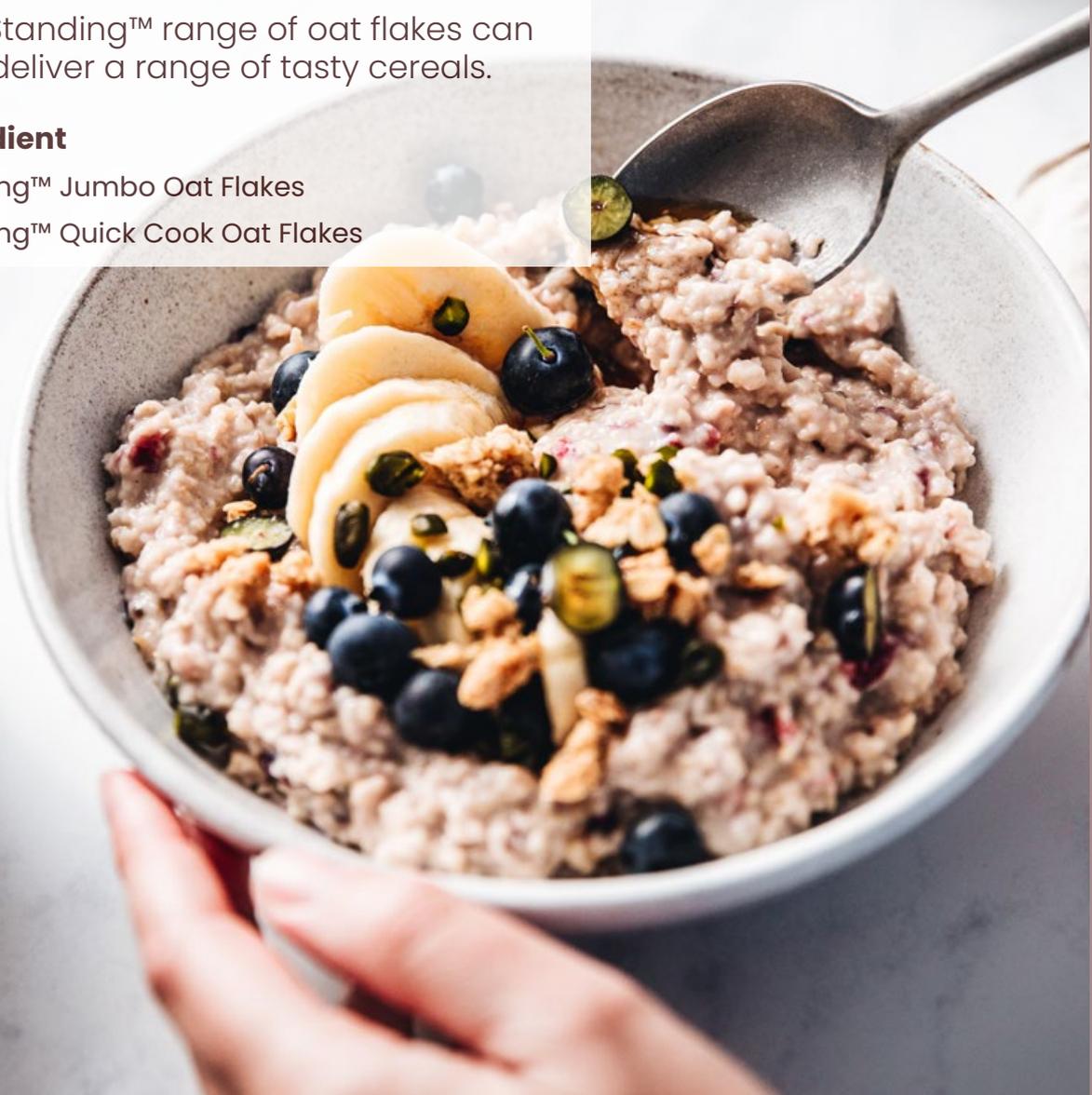
CEREALS

Our Oat-Standing™ range of oat flakes can help you deliver a range of tasty cereals.

Key Ingredient

Oat-Standing™ Jumbo Oat Flakes

Oat-Standing™ Quick Cook Oat Flakes



Key Characteristics of Oat-Standing™ Ingredients in Cereals:



TASTE

Oat-Standing™ Oat Flakes provides a natural sweet oaty taste.



APPEARANCE

Oat-Standing™ Oat Flakes have a nice golden colour and consistent shape and size allowing you to achieve a uniform product.



EASE OF USE

Oat-Standing™ Oat Flakes are easy to incorporate into typical cereal recipes.



TEXTURE

Oat-Standing™ Oat Flakes are available in chewy or crunchy textures to suit your texture requirements.



HEALTH

Oats naturally contain a wealth of important nutrients including high fibre and complex carbohydrates which results in a slow release of sugar into the blood providing a sustained energy supply to the body.



Get in Touch

To find out more about how Tirlán can support you in developing your solutions, please contact us directly.

Email: info@tirlaningredients.com

www.tirlaningredients.com



[LinkedIn.com/showcase/tirlan-ingredients](https://www.linkedin.com/showcase/tirlan-ingredients)

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