



MEETING CONSUMER DEMAND

**For Reduced-Sugar
Cereal Bars & Granolas
With Tirlán's Innovative
Binding Solutions.**

THE CHALLENGE

Challenge Overview

Understanding Consumer Drivers

Manufacturer & Brand Challenges

THE SOLUTION

Solution Overview

Research Trial Results – Cereal Bars

Research Trial Results – Granola

Partner with Tirlán



Cereal bars, protein bars, and granola-based cereals typically require a binder to hold together various ingredients, such as flakes, fruits, nuts, and seeds.

Currently, most manufacturers rely on high-sugar syrups, including golden syrup, honey, glucose syrup, and glycerines, to fulfil this binding function.

**These syrups often
contain sugar levels
exceeding 80%**





Consumer motivations for choosing reduced sugar products are influenced by several key factors:

Health & Wellness is the primary driver, as consumers look to support overall health, manage weight, control blood sugar, and maintain dental health.

Consumers expect reduced sugar products without compromising on **great taste and texture**.



Manufacturers and brands face several challenges when attempting to reduce sugar in their products:

Manufacturer Challenge

Tirlán's Solution

Product Performance

Taste, Texture and Appearance

Oat-Standing™ Liquid Oat Base delivers:

- Pleasantly **sweet** sensory profile
- **Smooth** texture
- Appealing **shine**

Functionality

Oat-Standing™ Liquid Oat Base provides **excellent binding capabilities**.

Regulatory Requirements

Tirlán's nutrition team are on hand to support manufacturers in navigating **sugar reduction regulations** and achieving targeted **nutritional claims**.

Clean Label

Less additive, Natural Ingredients, Transparency

Oats are widely recognised as a **natural**, consumer-preferred ingredient.

Oat-Standing™ Liquid Oat Base, made from gluten free oats grown on Irish family farms, offers **full traceability and quality assurance**.

Market Differentiation

Oat-Standing™ Liquid Oat Base provides an **innovative** sugar reduction method.



Tirlán has explored the use of Oat-Standing™ Liquid Oat Base as a healthier alternative to traditional sugar syrups.

This innovative Liquid Oat Base aims to provide comparable binding properties while significantly reducing the overall sugar content.

Oat-Standing™ Liquid Oat Base contains only 30% sugar, making it a lower-sugar option. Additionally, it offers the benefit of being a source of fibre, in contrast to the high-sugar binders currently in use.

Table 1: Nutritional comparison of Oat-Standing™ Liquid Oat Base versus traditional sugar syrups

Nutritional component (g/100g)	Oat-Standing™ Liquid Oat Base	Golden Syrup
Energy (Kcal)	296	325
Fat (g)	3.5	0
Of which saturate (g)	0.8	0
Carbohydrates (g)	60.4	80
Of which sugar (g)	29.7	80
Fibre (g)	5.3	0
Protein (g)	2.8	<0.3

Cereal Bars

The trial focused on testing the effectiveness of Oat-Standing™ Liquid Oat Base as a binder in oat-based cereal bars. In the trial, golden syrup was replaced with Oat-Standing™ Liquid Oat Base on a like-for-like basis, allowing for a direct comparison of binding performance, texture, and overall product quality.

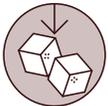
17% of golden syrup in the cereal bar formulation was replaced with 17% Oat-Standing™ Liquid Oat Base. The results were as follows:



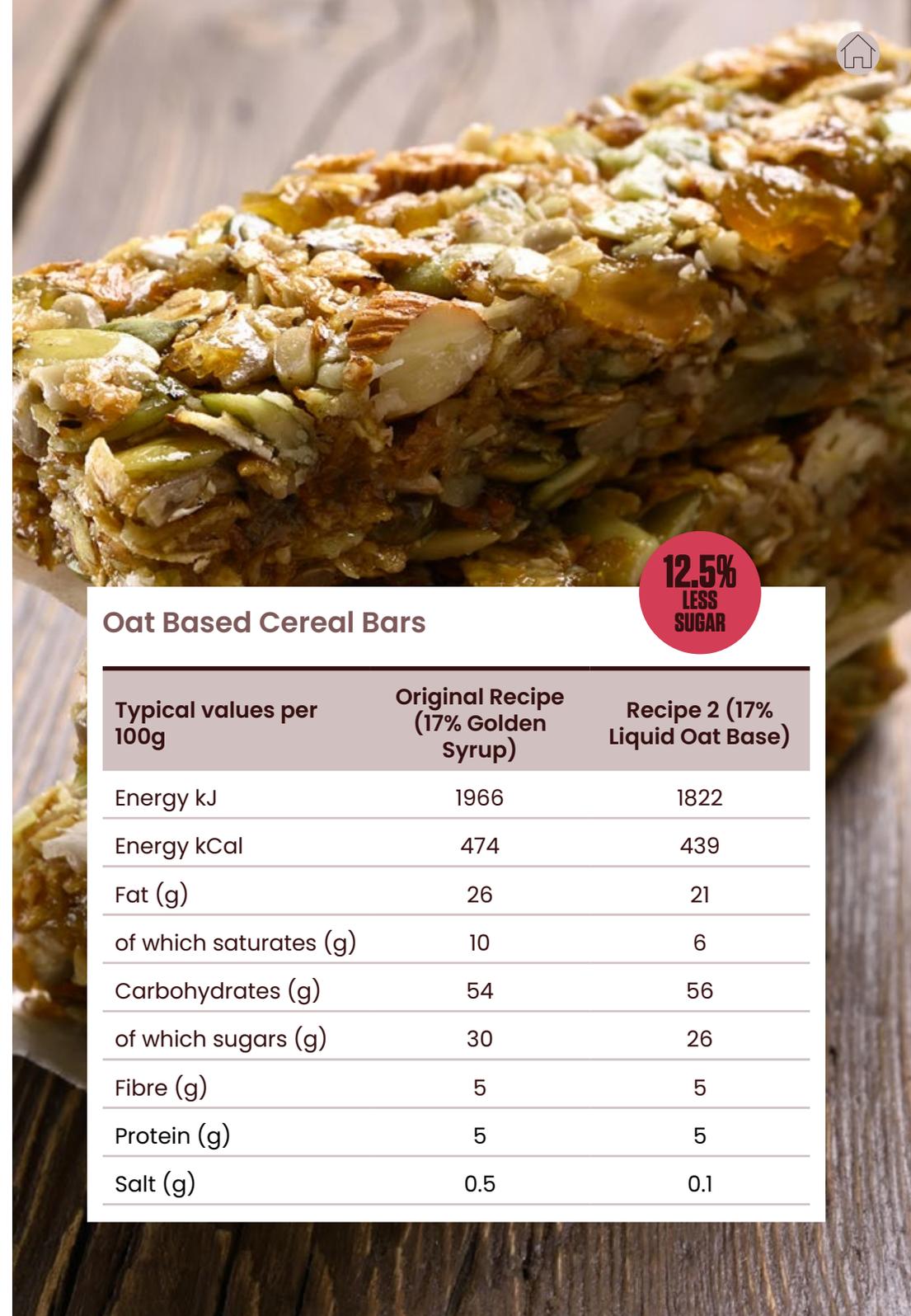
Binding Performance: Oat-Standing™ Liquid Oat Base demonstrated comparable binding capabilities to golden syrup, maintaining product integrity.



Nutritional Improvements: The sugar content in the bars was reduced by 12.5%.



Taste and Sweetness: The sweetness of the bars was rated as highly acceptable. Furthermore, there is potential to reduce the brown sugar content in the recipe, allowing for an even greater inclusion of Oat-Standing™ Liquid Oat Base.



**12.5%
LESS
SUGAR**

Oat Based Cereal Bars

Typical values per 100g	Original Recipe (17% Golden Syrup)	Recipe 2 (17% Liquid Oat Base)
Energy kJ	1966	1822
Energy kCal	474	439
Fat (g)	26	21
of which saturates (g)	10	6
Carbohydrates (g)	54	56
of which sugars (g)	30	26
Fibre (g)	5	5
Protein (g)	5	5
Salt (g)	0.5	0.1

Granola

The trial focused on testing the effectiveness of Oat-Standing™ Liquid Oat Base as a binder in oat-based granolas. In these trials, concentrated grape juice was replaced with OaStanding™ Liquid Oat Base on a like-for-like basis, allowing for a direct comparison of binding performance, texture, and overall product quality.

27% of concentrated grape juice in the granola formulation was replaced with 27% Oat-Standing™ Liquid Oat Base. The results were as follows:



Binding Performance: Oat-Standing™ Liquid Oat Base matched the binding capabilities of concentrated grape juice, ensuring the granola held together effectively.



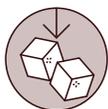
Aesthetic Enhancement: The use of Oat-Standing™ Liquid Oat Base imparted a significant, appealing shine to the granola, a desirable quality not achieved with concentrated grape juice.



Nutritional Benefits: Sugar levels in the granola were reduced by 37%, while the sweetness remained highly acceptable. Oat-Standing™ Liquid Oat Base proved to perform exceptionally well in this application.



Triple Oat Blend: The use of Oat-Standing™ Liquid Oat Base, combined with oat flakes and oat bran, resulted in a “Triple Oat Granola,” enhancing the oat profile of the product.



Reduced Reliance on Sugar Syrups: Incorporating Oat-Standing™ Liquid Oat Base added an additional oat component and enabled the elimination of traditional sugar syrups from the formulation.

Granola containing Oat-Standing™ Liquid Oat Base (Left) and Concentrated Grape Juice (Right)



Granola

Typical values per 100g	Original Recipe (17% Golden Syrup)	Recipe 2 (17% Liquid Oat Base)
Energy kJ	1742	1707
Energy kCal	418	411
Fat (g)	17.4	17.8
of which saturates (g)	1	1
Carbohydrates (g)	58	53
of which sugars (g)	12.8	9.3
Fibre (g)	6	7.3
Protein (g)	8	8.6
Salt (g)	0.02	0.01



Create your next market leading cereal bar or granola with Oat-Standing™ Liquid Oat Base — the ideal ingredient for taste, quality, and consumer appeal.

Contact us: www.tirlaningredients.com/contact