



ProFuture project: Mapping the market of algae-based food and beverages

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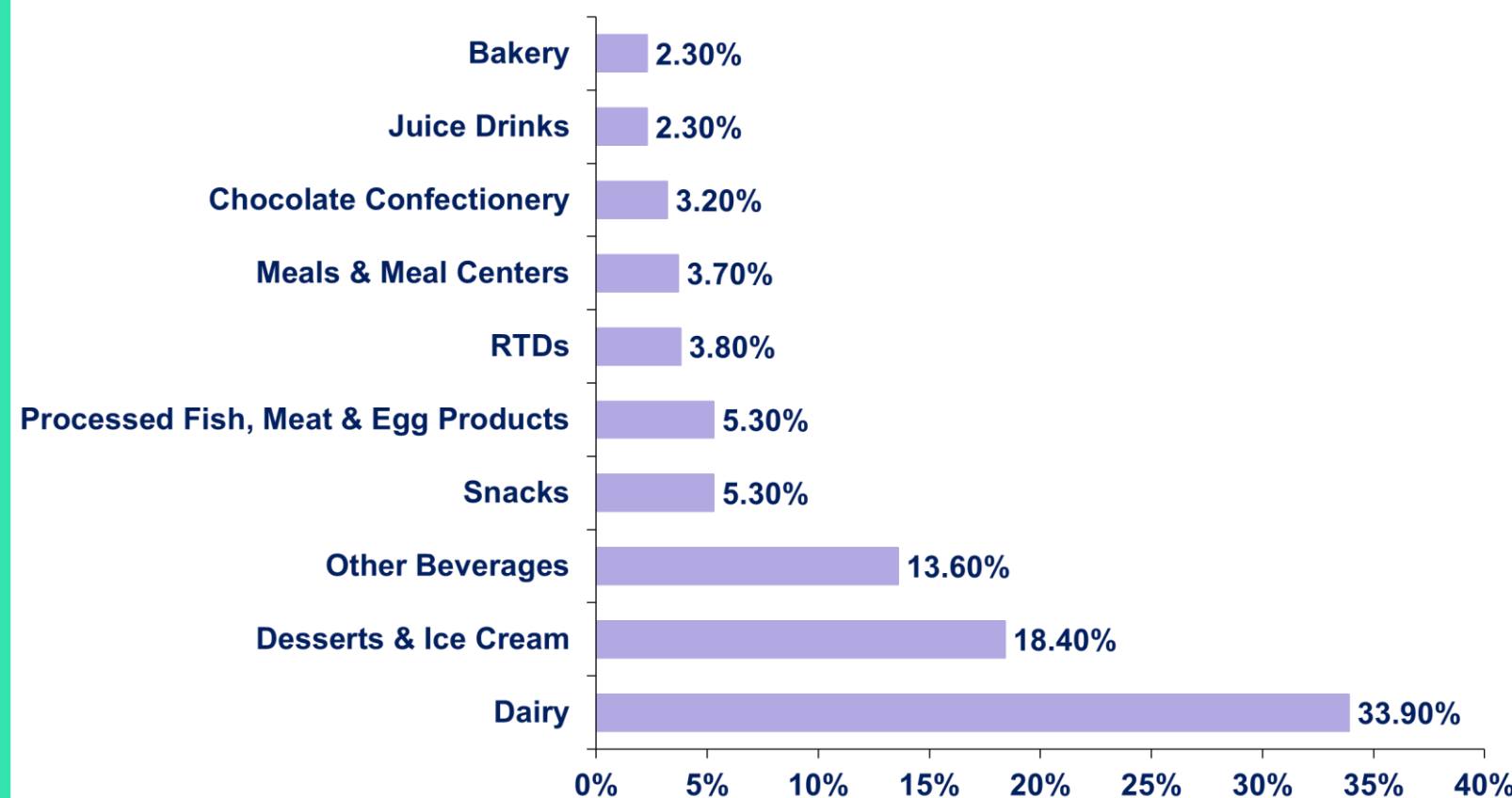
Algae-based food and beverages market (2015-2019)

Overview on global market

13,090 new products containing algal ingredients (biomass or extracts) were released worldwide between 2015–2019:

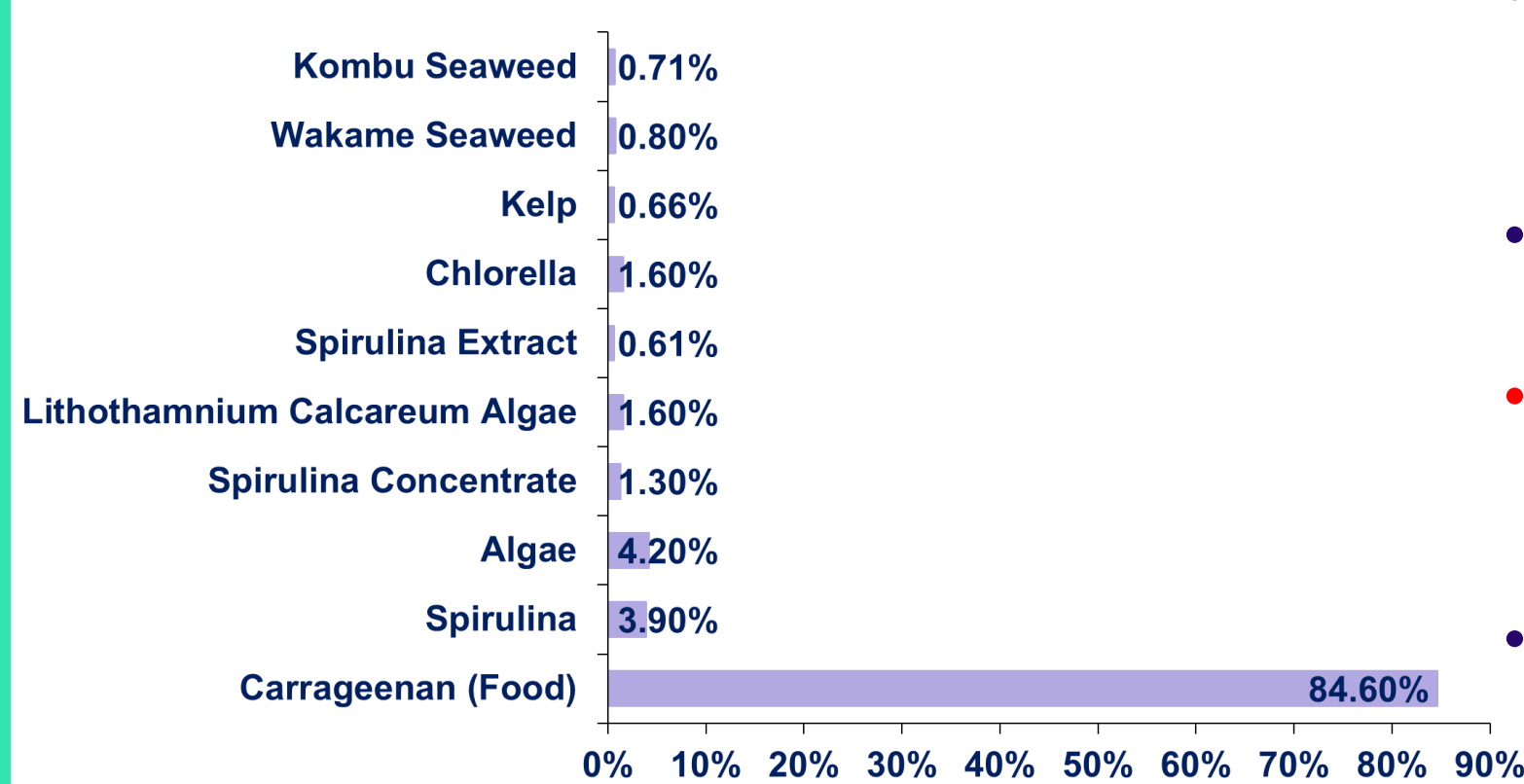
79.0% foods and 21.0% beverages

Sub-categories containing algal ingredients:



- Algal ingredients are used in 20 sub-categories.
- Dairy, desserts and ice creams are the dominant subcategories.

Algal ingredients used in food and beverage products:

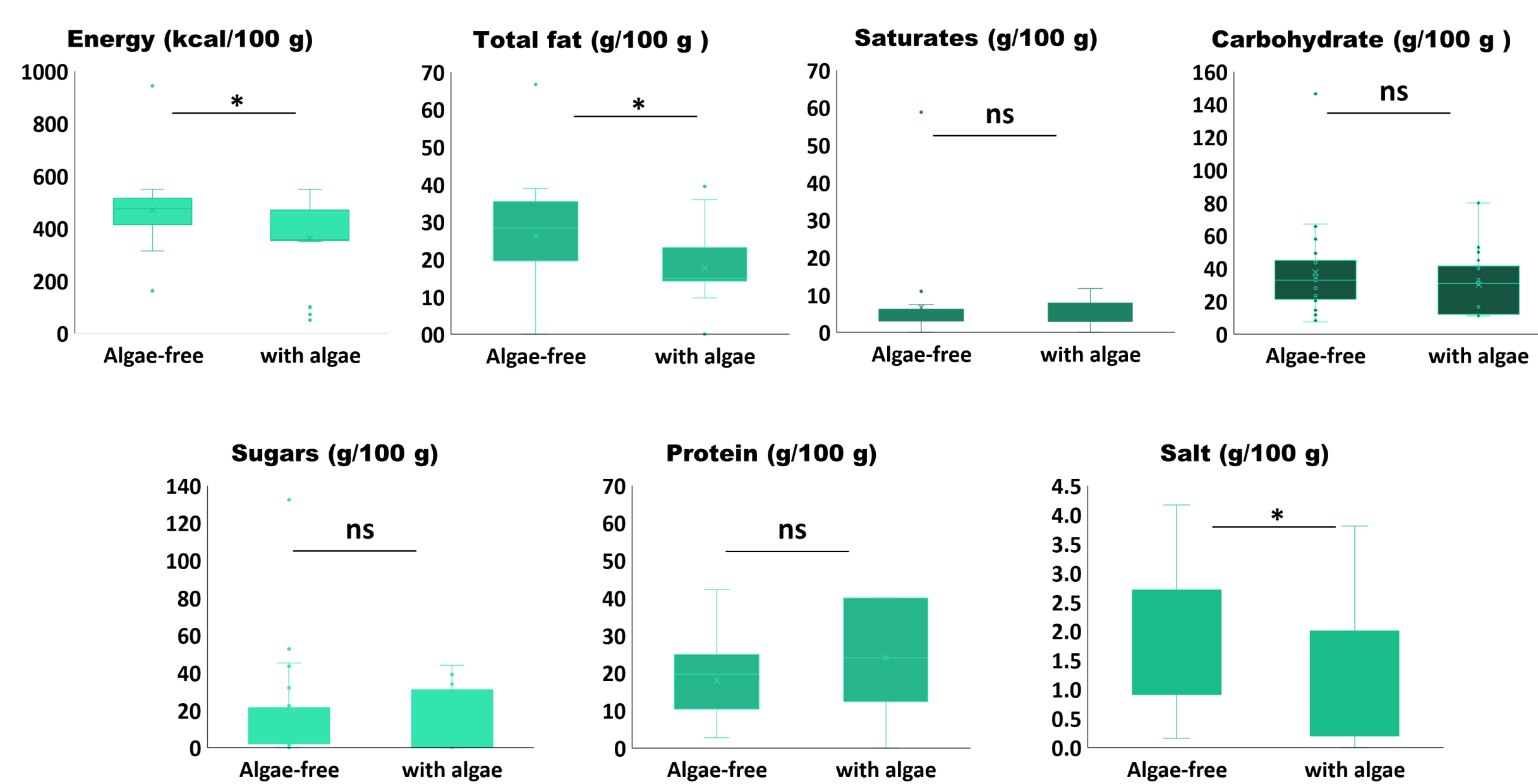


- Carrageenan (85%) was the predominant ingredient in the market.
- Spirulina (4%) is the most used microalgae.
- 4% of products have the term algae on the label with no specification about the species.
- Only 8% of products have the level of addition of algae.

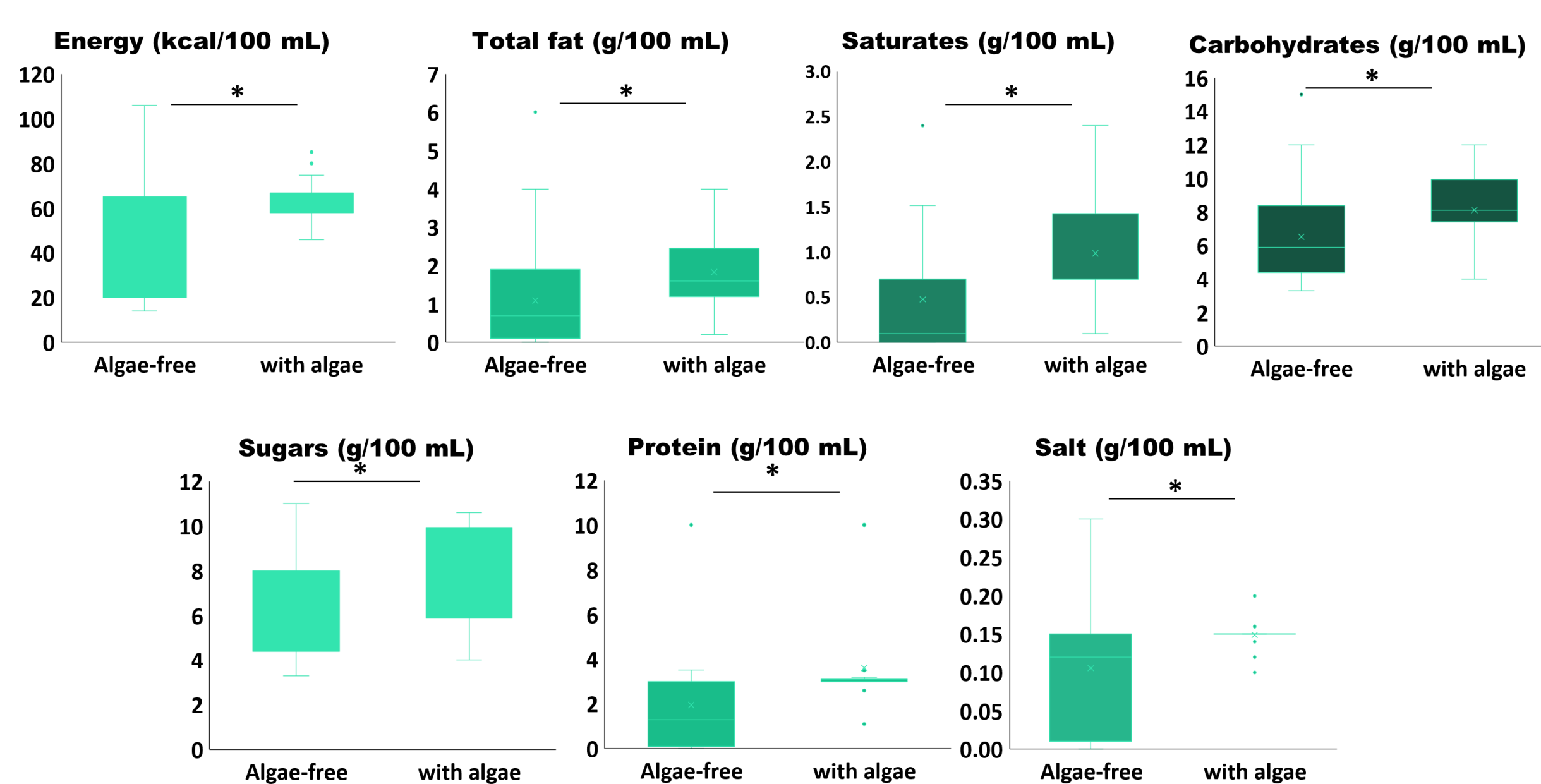
Key messages:

- Reformulation of food and beverages with algal ingredients **does not automatically guarantee** improvements of the nutritional properties!
- Microalgal ingredients are generally included at **very low percentages** and in few product categories, so there is still a huge untapped opportunity to incorporate them in food and beverages. Indeed, cost and consistent quality are still issues.
- Informative labeling and a more precise declaration of algae ingredient (strain and level of inclusion) on the labels are deemed necessary to help consumers choose algae-enriched products in a conscious way.

Nutritional labeling of algae-containing vs algae-free products: focus on Spanish market



Algae-based **snacks** had significantly lower energy, fat, and salt content, but no higher protein content, compared to algae-free counterparts.

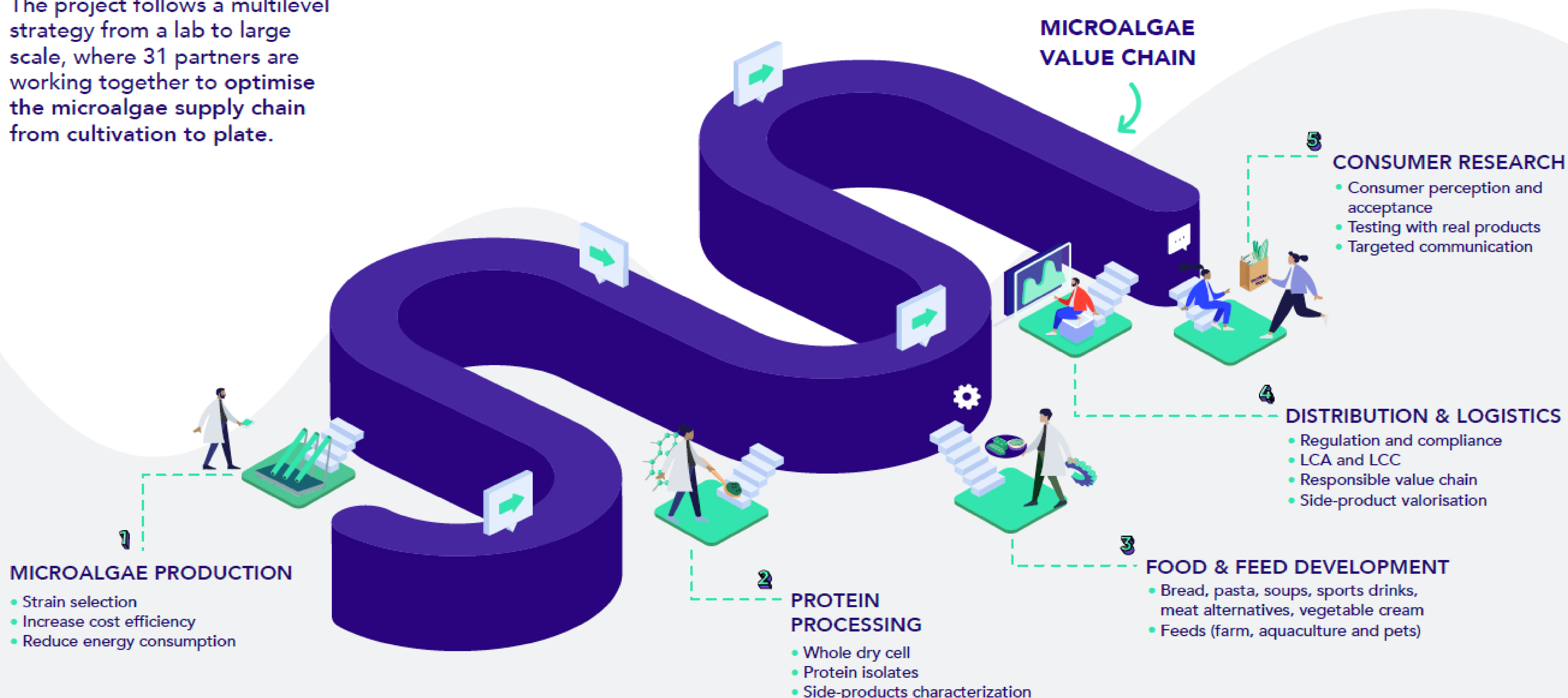


Ready to drink beverages reformulated with Spirulina showed increased levels of protein compared to their algae-free counterparts, but energy, total and saturated fats, carbohydrates, sugar, and salt also increased significantly.

ProFuture project at a glance

ProFuture

The project follows a multilevel strategy from a lab to large scale, where 31 partners are working together to optimise the microalgae supply chain from cultivation to plate.



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References:

Boukid F. and Castellari M. 2021. Food and Beverages Containing Algae and Derived Ingredients Launched in the Market from 2015 to 2019: A Front-of-Pack Labeling Perspective with a Special Focus on Spain. *Foods* 10(1), 173; <https://doi.org/10.3390/foods10010173>