

Sugar reformulation in Canadian bakery products with sugars-related claims

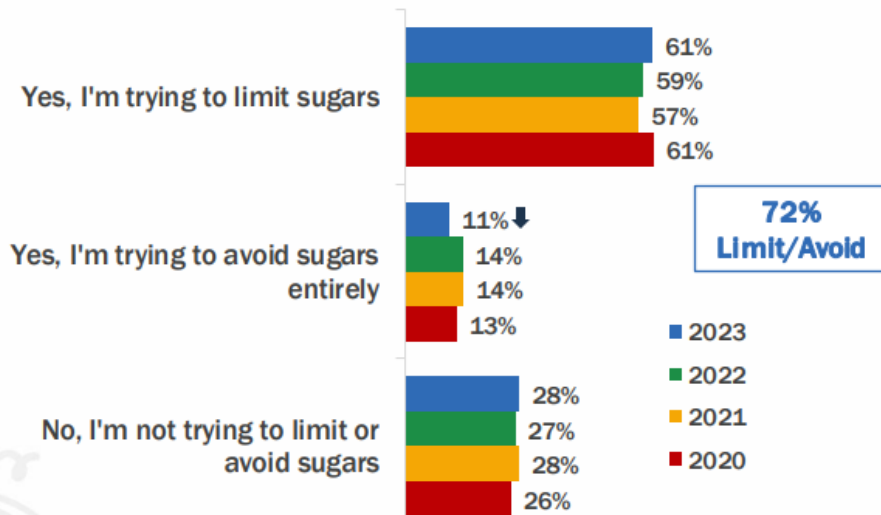
Flora Wang, PhD
Manager, Nutrition & Scientific Affairs

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London, ON

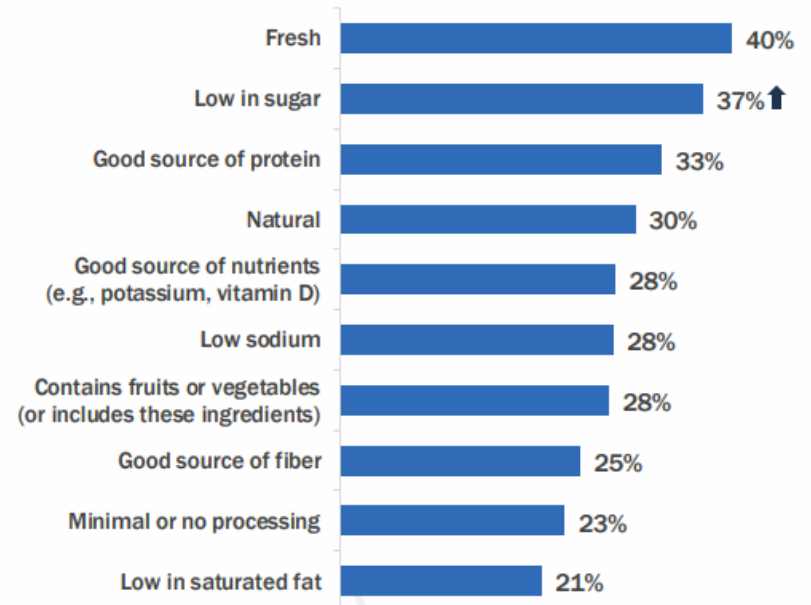
1. Background—Consumer Trend that Demonstrates the Demand of low-sugar packaged foods

- An IFIC online survey of 1,022 Americans ages 18 to 80 in April 2023

Trying To Limit/Avoid Sugars



Definition of Healthy Food (Top Choices)



1. Background—Canadian Regulatory Landscape that Incentivize Sugars Reduction

Nutrition Labelling Regulation

- Published in December 2016
- Transition ending in December 2023

NEW

Nutrition Facts Valeur nutritive	
Per 1 cup (250 mL) pour 1 tasse (250 mL)	
Calories 110	% Daily Value*
	% valeur quotidienne*
Fat / Lipides 0 g	0 %
Saturated / saturés 0 g	0 %
+ Trans / trans 0 g	
Carbohydrate / Glucides 26 g	
Fibre / Fibres 0 g	0 %
Sugars / Sucres 22 g	22 %
Protein / Protéines 2 g	
Cholesterol / Cholestérol 0 mg	
Sodium 0 mg	0 %
Potassium 450 mg	10 %
Calcium 30 mg	2 %
Iron / Fer 0 mg	0 %
*5% or less is a little, 15% or more is a lot *5% ou moins c'est peu, 15% ou plus c'est beaucoup	

New % Daily Value for total sugars

New footnote to help interpret the % Daily Value

Front-of-Package Labelling Regulation

- Published in July 2022
- Transition ending in December 2025



Threshold:
=>15% Daily Value



1. Background—Sugar Claims that Highlights Sugars Reformulation Efforts

- Nutrient content claims are statements located on the front of the package to highlight the content of certain nutrients in the product.
- There are six sugars-related nutrient content claims permitted in Canada, including one new claim:

Free of
sugars

Reduced in
sugars

Lower in
sugars

No added
sugars

Unsweetened

Low in sugars
(new claim)

1. Background—Previous Research on Sugar Reformulation

Public Health Nutrition: page 1 of 9

doi:10.1017/S1368980020001159

Reformulation of sugar contents in Canadian prepackaged foods and beverages between 2013 and 2017 and resultant changes in nutritional composition of products with sugar reductions

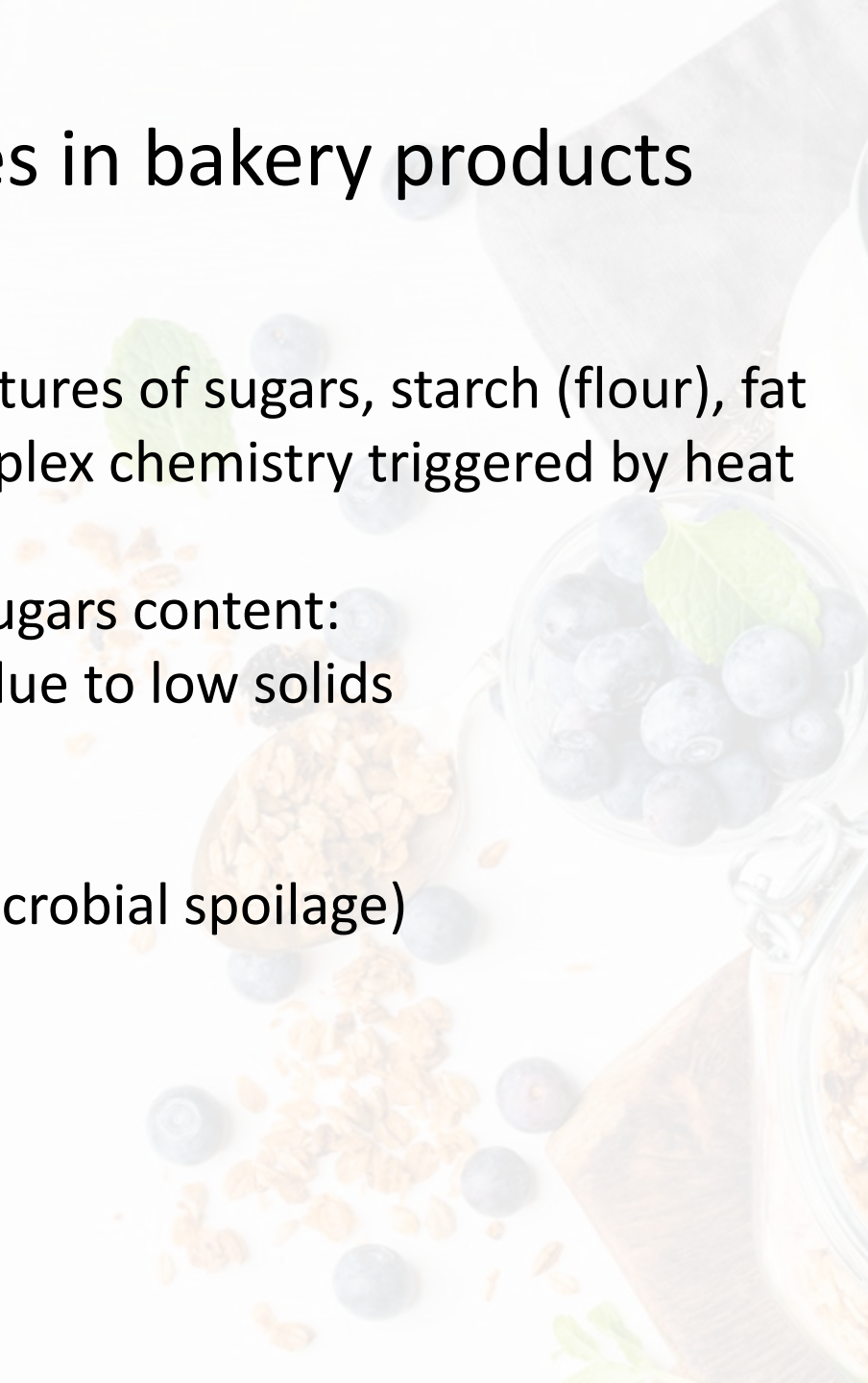
Jodi T Bernstein, Anthea K Christoforou, Madyson Weippert and Mary R L'Abbé*
Department of Nutritional Sciences, Faculty of Medicine, University of Toronto, Toronto, ON M5S 1A8, Canada

Among products reformulated to be **lower in sugars**:

- A median value of sugars reduction = 1.6 g per 100 g or 100 mL
- A median increase in starch = 1.5 g per 100 g or 100 mL
- No significant change in fibre, protein, or calories overall

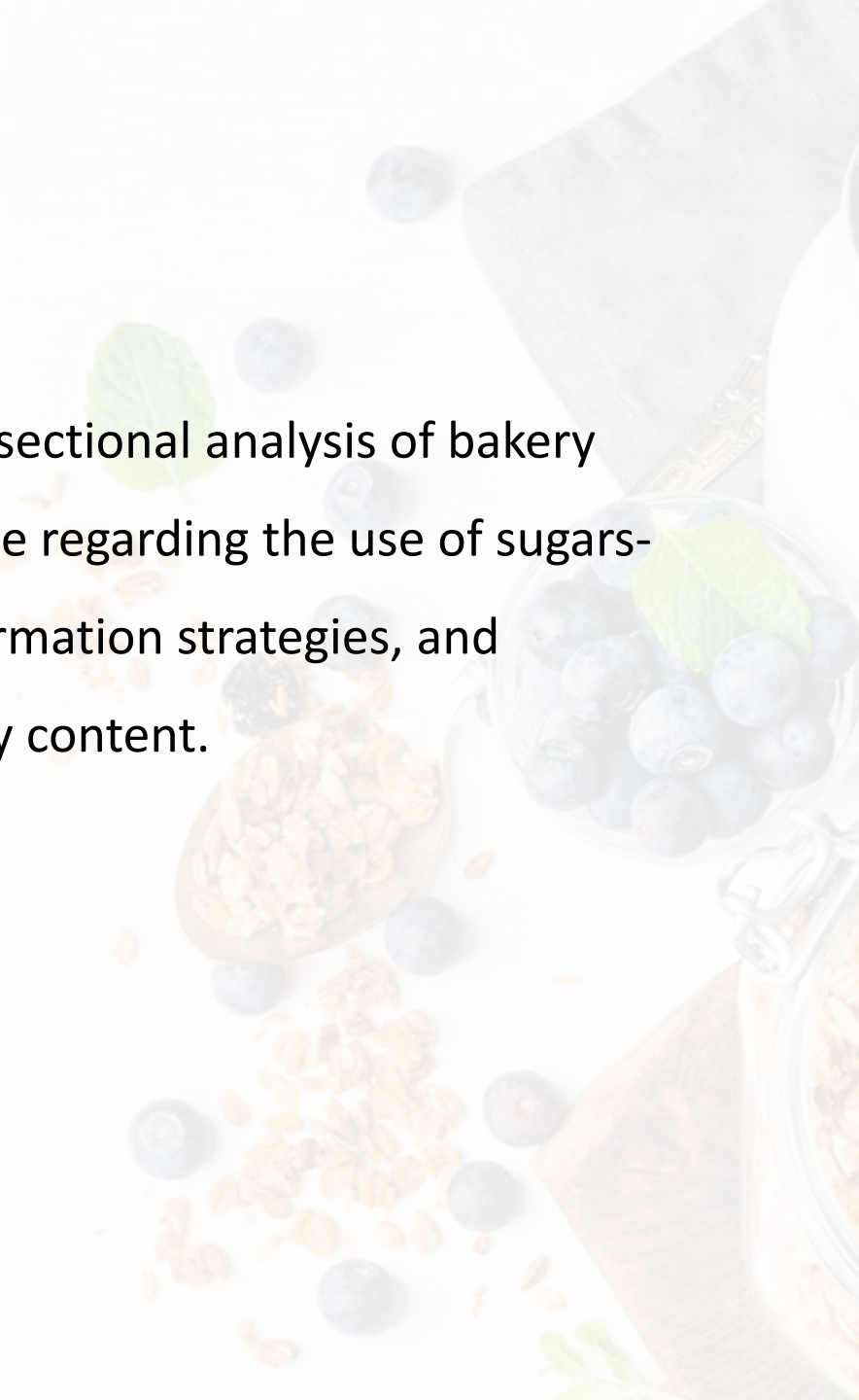
Reformulation challenges in bakery products

- Structure relies on varying mixtures of sugars, starch (flour), fat and protein, created with complex chemistry triggered by heat
- Possible issues with reduced sugars content:
 - Loss of viscosity and body due to low solids
 - Poor aeration
 - No browning
 - Loss of shelf life (staling, microbial spoilage)
 - Poor-flavour release



2. Objectives

This study aimed to perform a cross-sectional analysis of bakery products in the Canadian marketplace regarding the use of sugars-related nutrient content claims, reformation strategies, and changes in macronutrient and energy content.



3. Methods—Data Source



Mintel Global New Product Database

- **Five product launch types included**

- New product
- Line/Range extension
- Reformulations
- New Packaging
- Re-launches
- **Data Range: 1996 - present**



CLAIMS
What they are and how they're trending.



CATEGORIES
Who's innovating in your market.



PACKAGING
The concepts, the features, the insights.



INGREDIENTS AND FORMULATIONS
How, where and why they're evolving.



SPECIALIZED NUTRITION
Where it's heading and who's driving change.

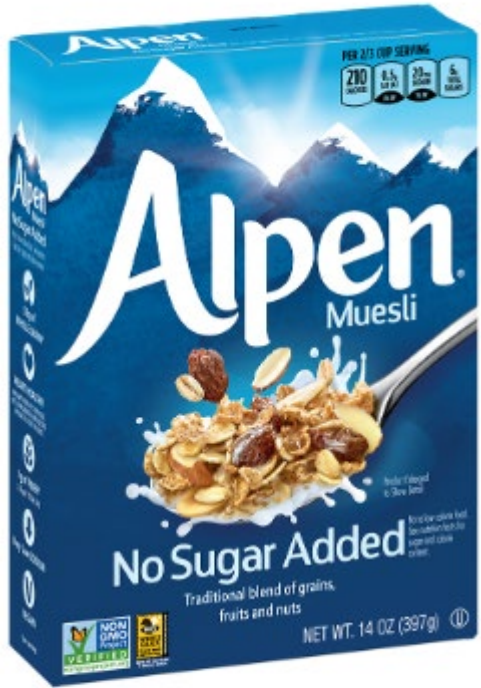
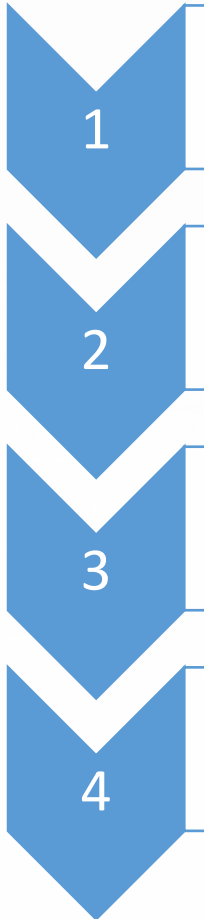


PATENTS
AI-powered global analysis on pre-launch innovation.



REGULATORY ANALYSIS
The necessary changes to keep on top of.

3. Methods—Process



No Sugar Added

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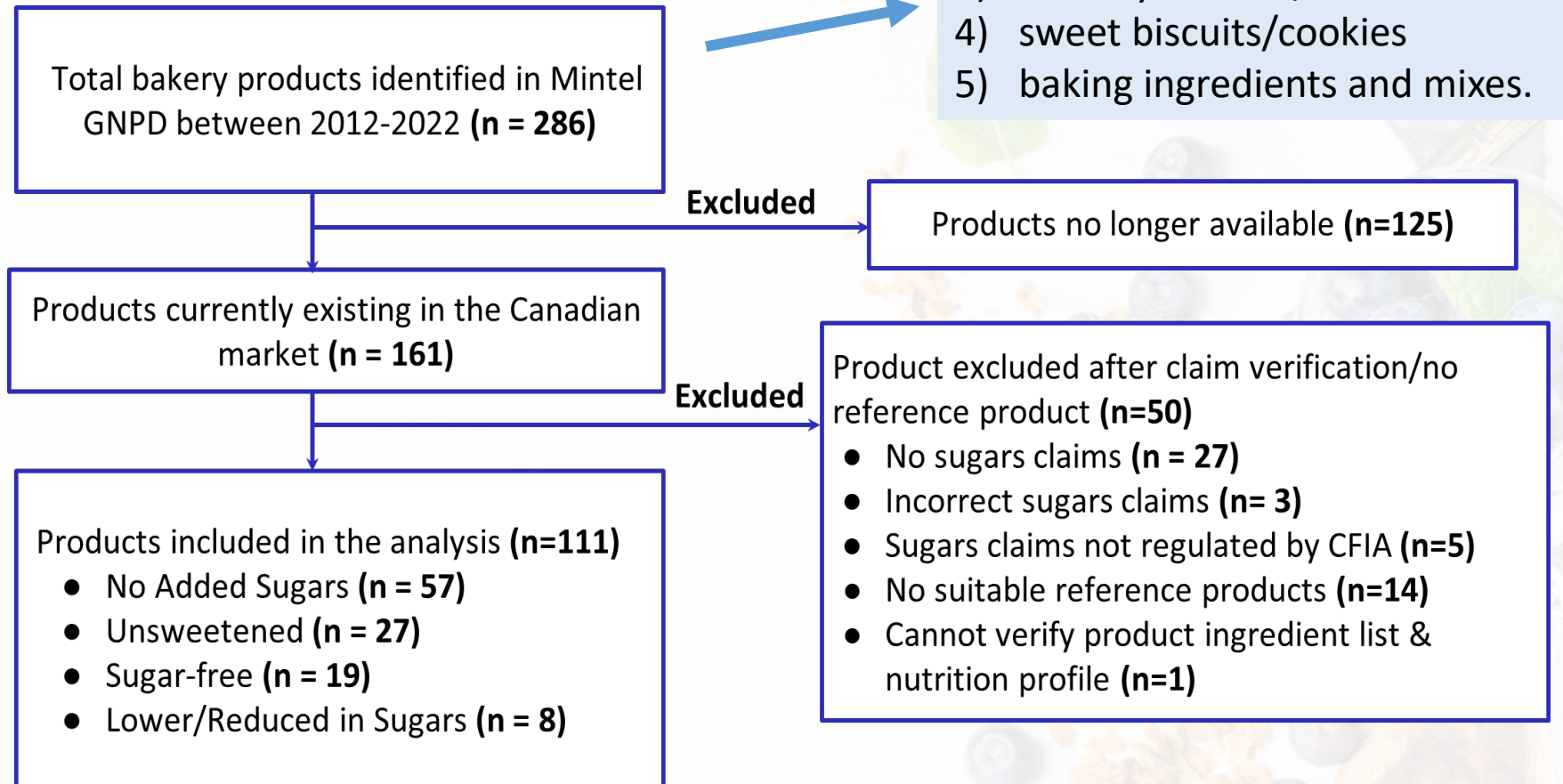
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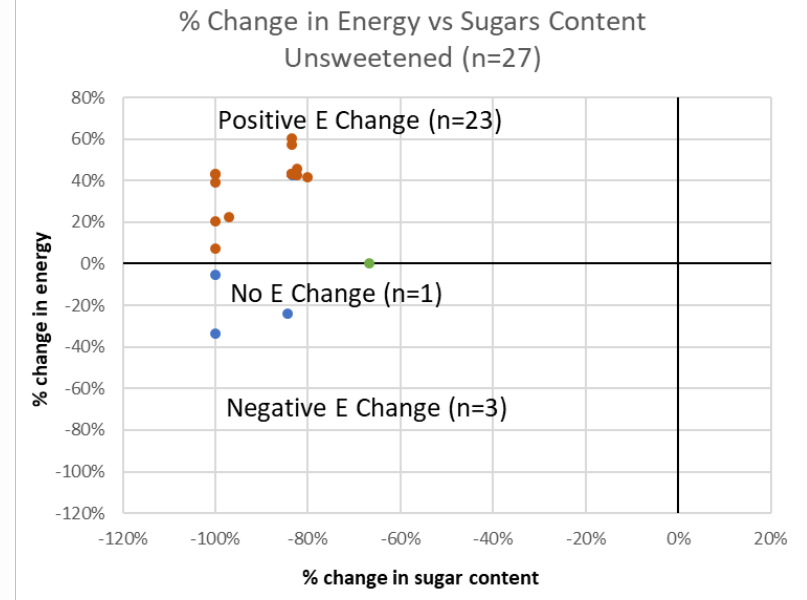
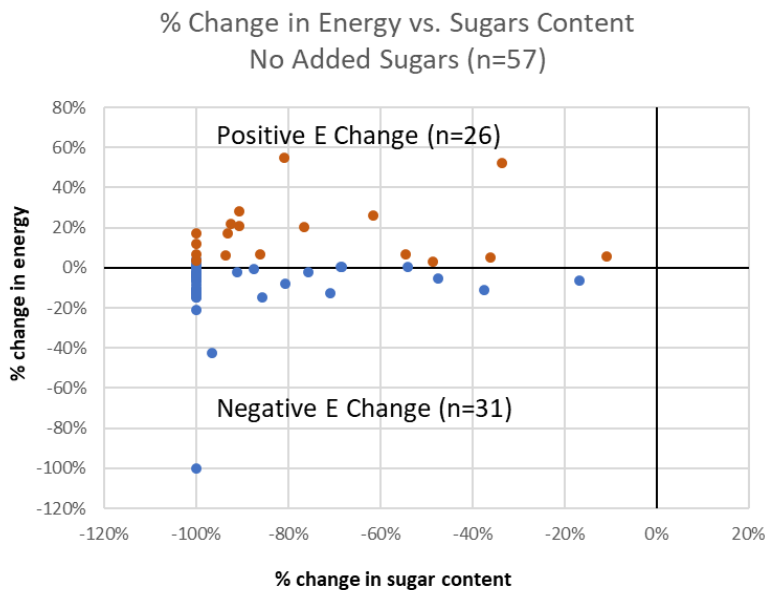
e claim

4.1 Product Characteristics



4.2 Changes in Total Sugars and Calories

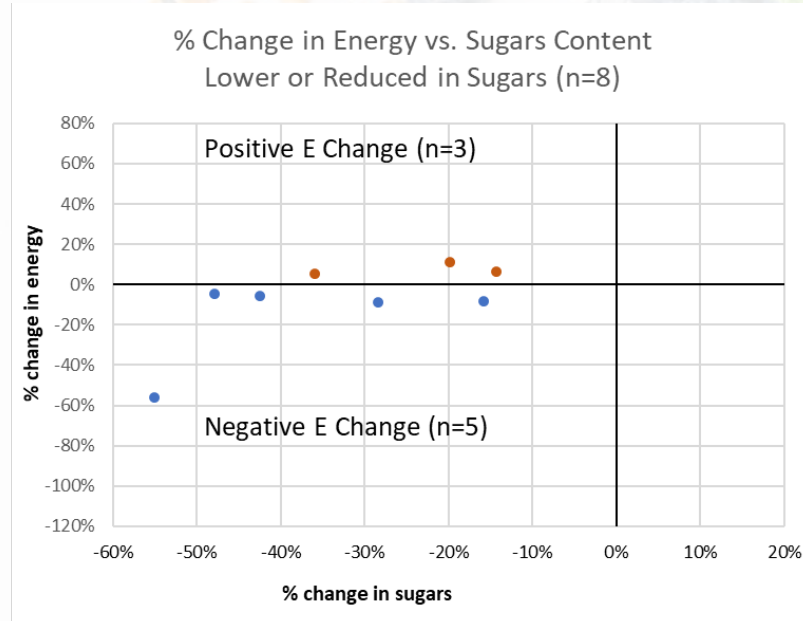
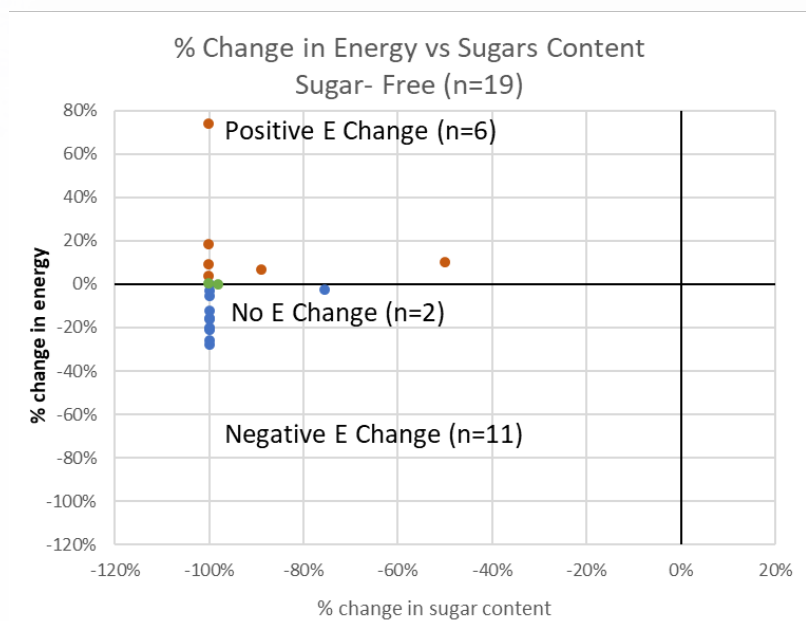
- About 46% of bakery products with “no added sugars” claims, 85% of “unsweetened”, 32% of “sugar-free” and 17% of “lower / reduced in sugars” claims had higher energy content compared to their corresponding reference products.



Change in Energy: Positive—red dots; Negative—blue dots; No Change—green dots

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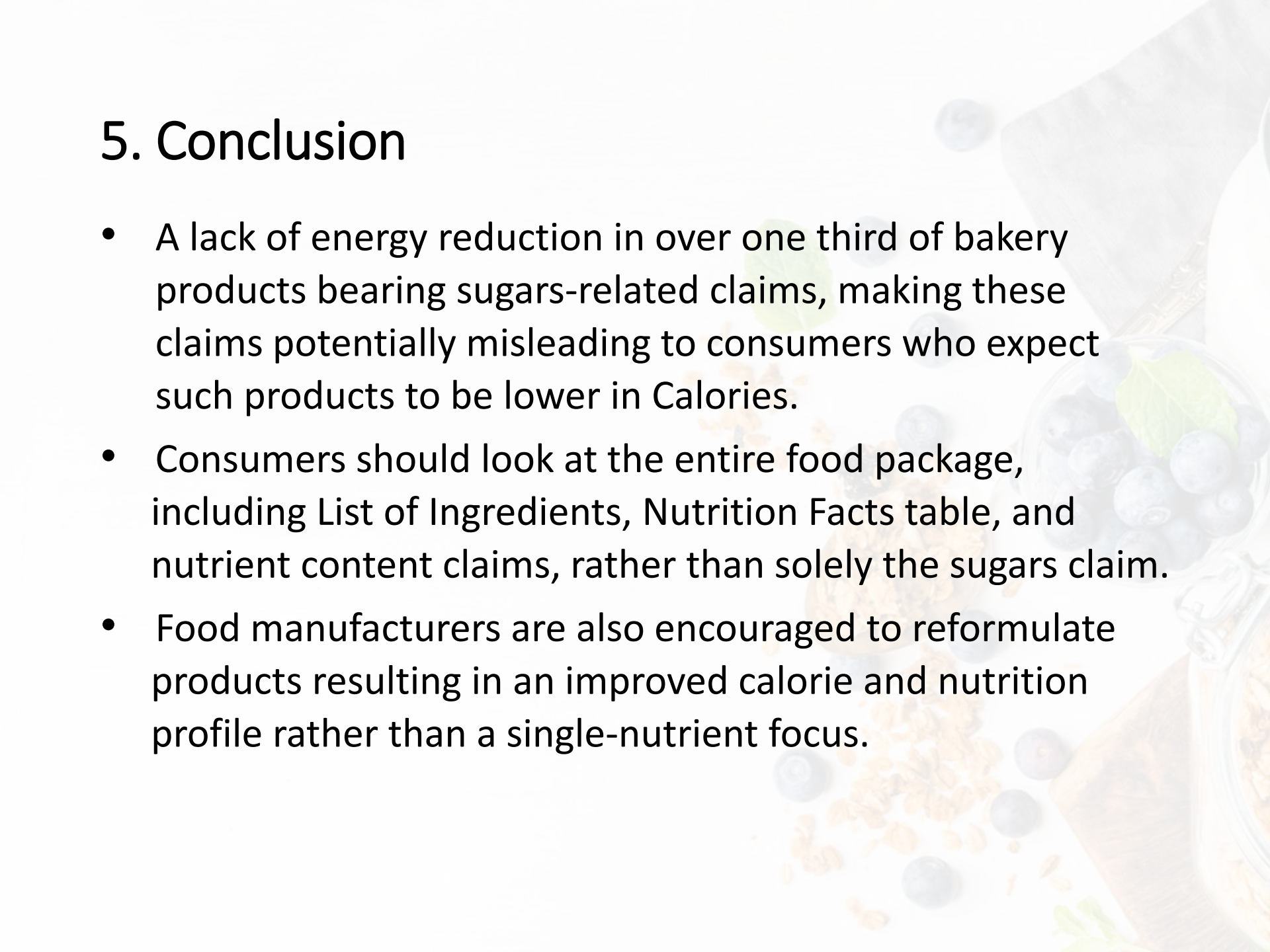
4.3 Change in Energy and Key Nutrients

Claims	Sugars	Energy	Fibre	Carbohydrate	Fat
No Added Sugars		- The claim products with higher energy content generally had added starch, sugar alcohols, oils, or protein isolates as substitutes		(g/100g)	
Unsweetened (n=27)		- Most claim products were baking ingredients such as unsweetened coconut. The higher average energy content was due to a higher proportion of shredded coconut which has a higher energy density.			
Sugar-Free (n=19)		- Most claim products with higher energy content were featuring “keto” with added ingredients such as coconut oil, and seeds.		(g/100g)	
Lower / Reduced in Sugars (n=8)		- The claim products with higher energy content (n=3) also had higher fat content, which contributed to the energy difference.	(kcal/100g)		

4.4 Common Replacement Ingredients

Ingredient Category	Common Examples	Key Functional Roles	Claim Category
Sugar Alcohol	Erythritol, Maltitol, Sorbitol, Xylitol	Sweetening agents, Bulking	No Added Sugars, Sugar-Free, Lower/Reduced in Sugars
Low-caloric sweeteners	Stevia, Sucralose, Acesulfame potassium, Monk Fruit Extract	Sweetening agents	Sugar-free, Lower /Reduced in Sugars
Fibre	Inulin, Gum, Polydextrose	Bulking, Texture, Structure, Emulsifier, Stabilizer, Thickener	Sugar-Free, Lower /Reduced in Sugars
Starch	Wheat starch, Dextrin, Rice flour	Texture, Structure, Moisture retention, Gel formation	No Added Sugars, Unsweetened

5. Conclusion

- A lack of energy reduction in over one third of bakery products bearing sugars-related claims, making these claims potentially misleading to consumers who expect such products to be lower in Calories.
 - Consumers should look at the entire food package, including List of Ingredients, Nutrition Facts table, and nutrient content claims, rather than solely the sugars claim.
 - Food manufacturers are also encouraged to reformulate products resulting in an improved calorie and nutrition profile rather than a single-nutrient focus.
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Acknowledgements

Canadian Sugar Institute Staff

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Jessica Yu, MPH, RD candidate

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