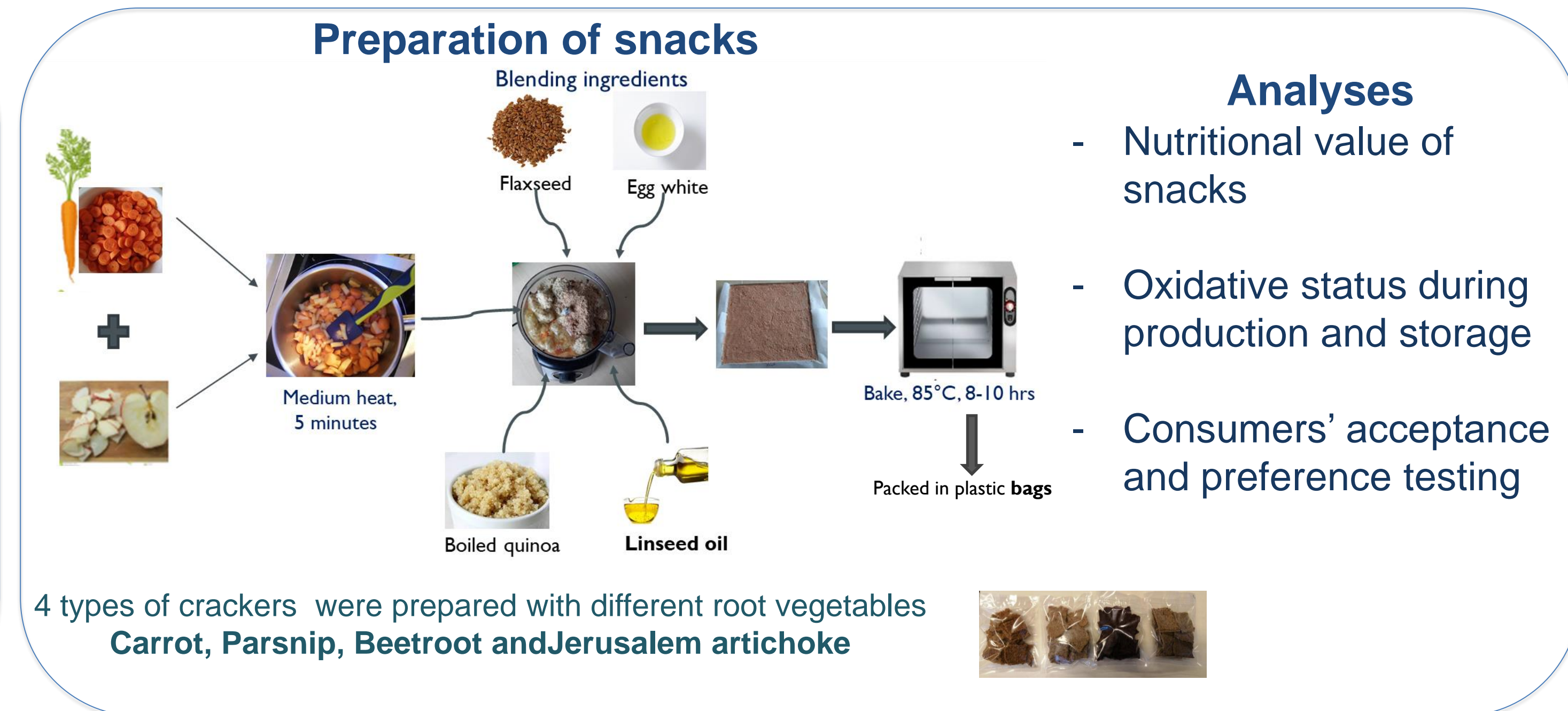
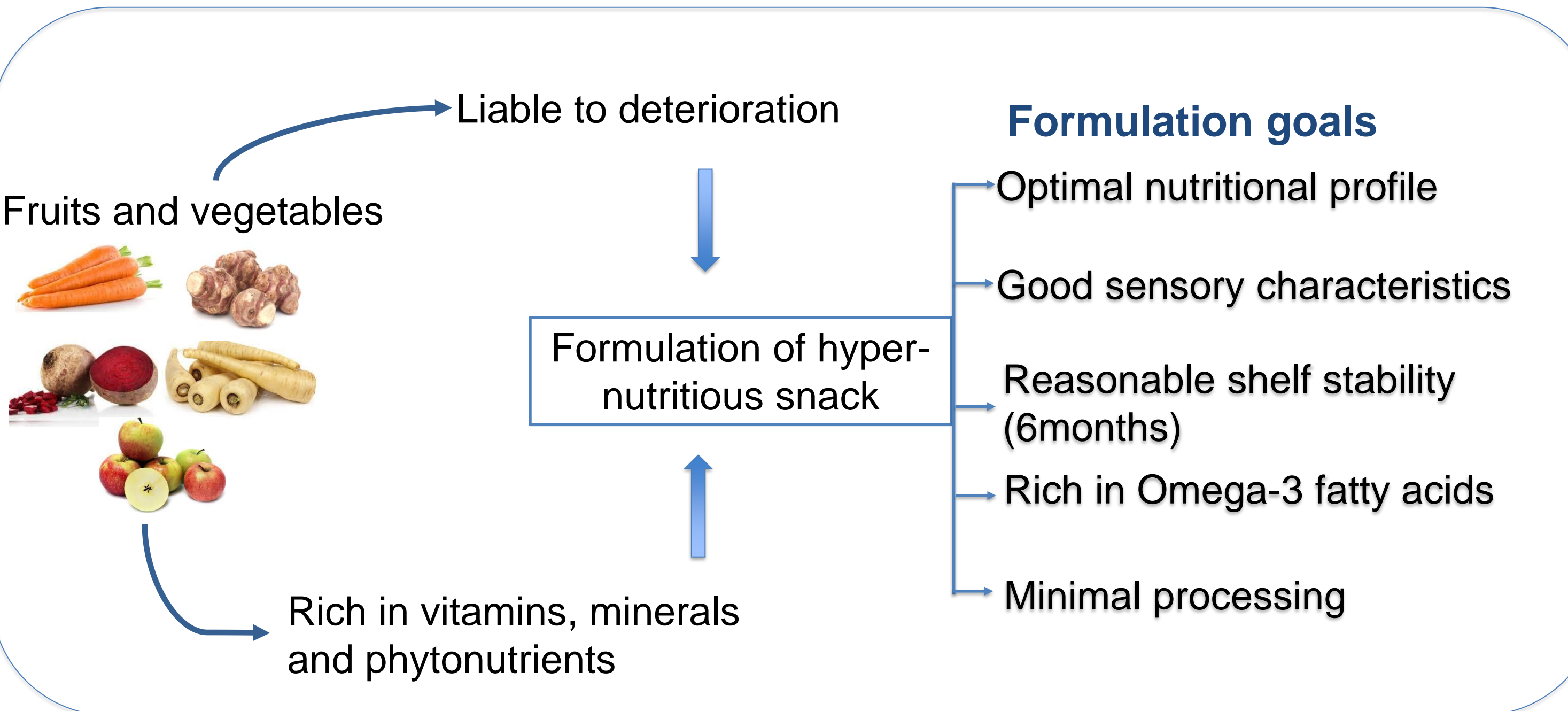


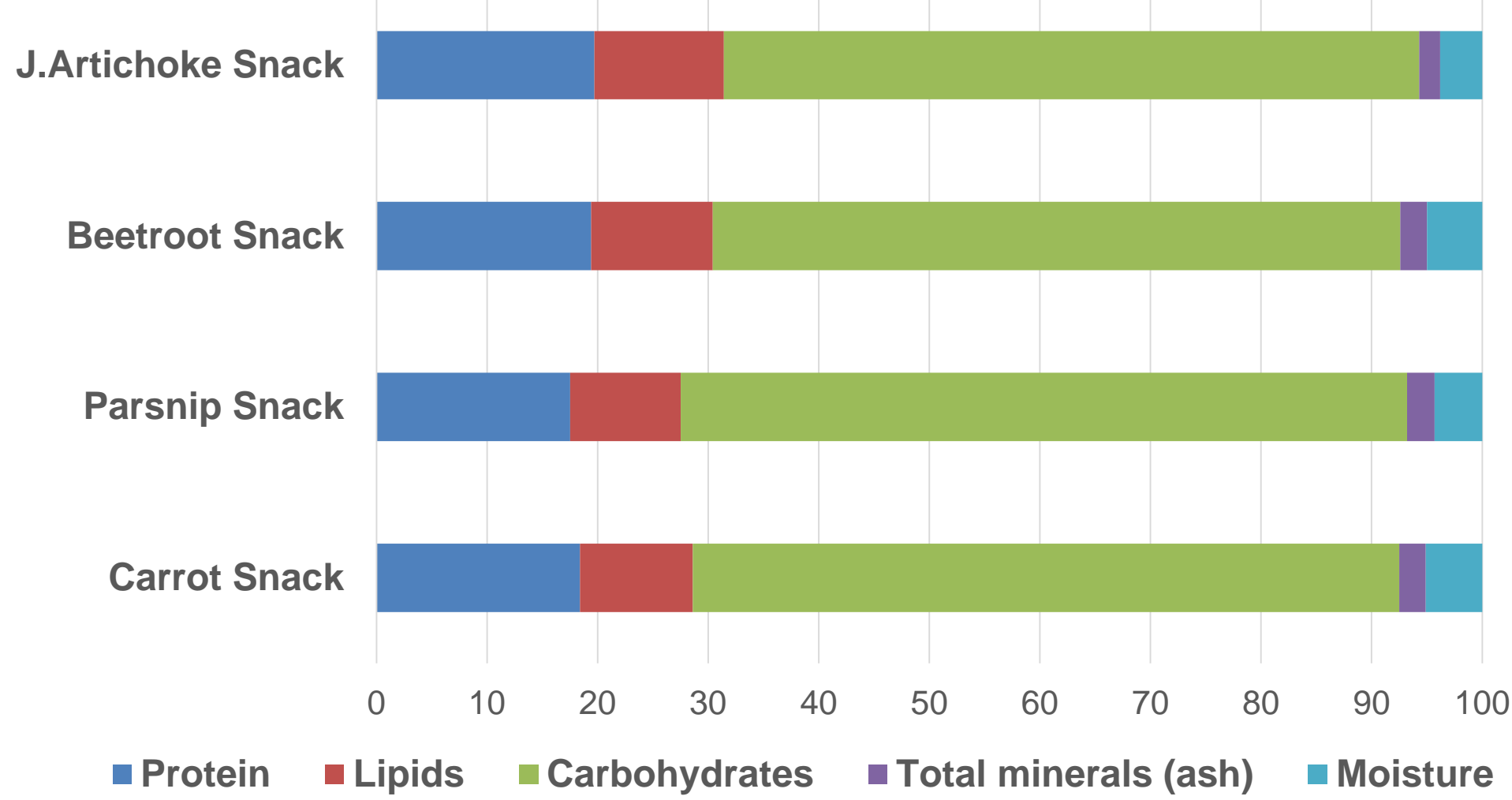
Context

Methods



Results

Nutrition value of snacks



Constituent	Amount per 100g			
	Carrot Snack	Parsnip Snack	Beetroot Snack	J. Artichoke Snack
Calories (kcal)	369.2	366.6	370.4	383.7
Lipids /total fats (g)	10.2	10.0	11.0	11.7
- Saturated (g)	1.2	1.2	1.3	1.3
- Monounsaturated(g)	1.8	1.8	2.0	2.1
- Polyunsaturated(g)	7.2	7.0	7.7	8.3
- Omega-3 (ALA)	5.3	5.1	5.6	6.0
Dietary fibre	25.9	28.1	27.5	26

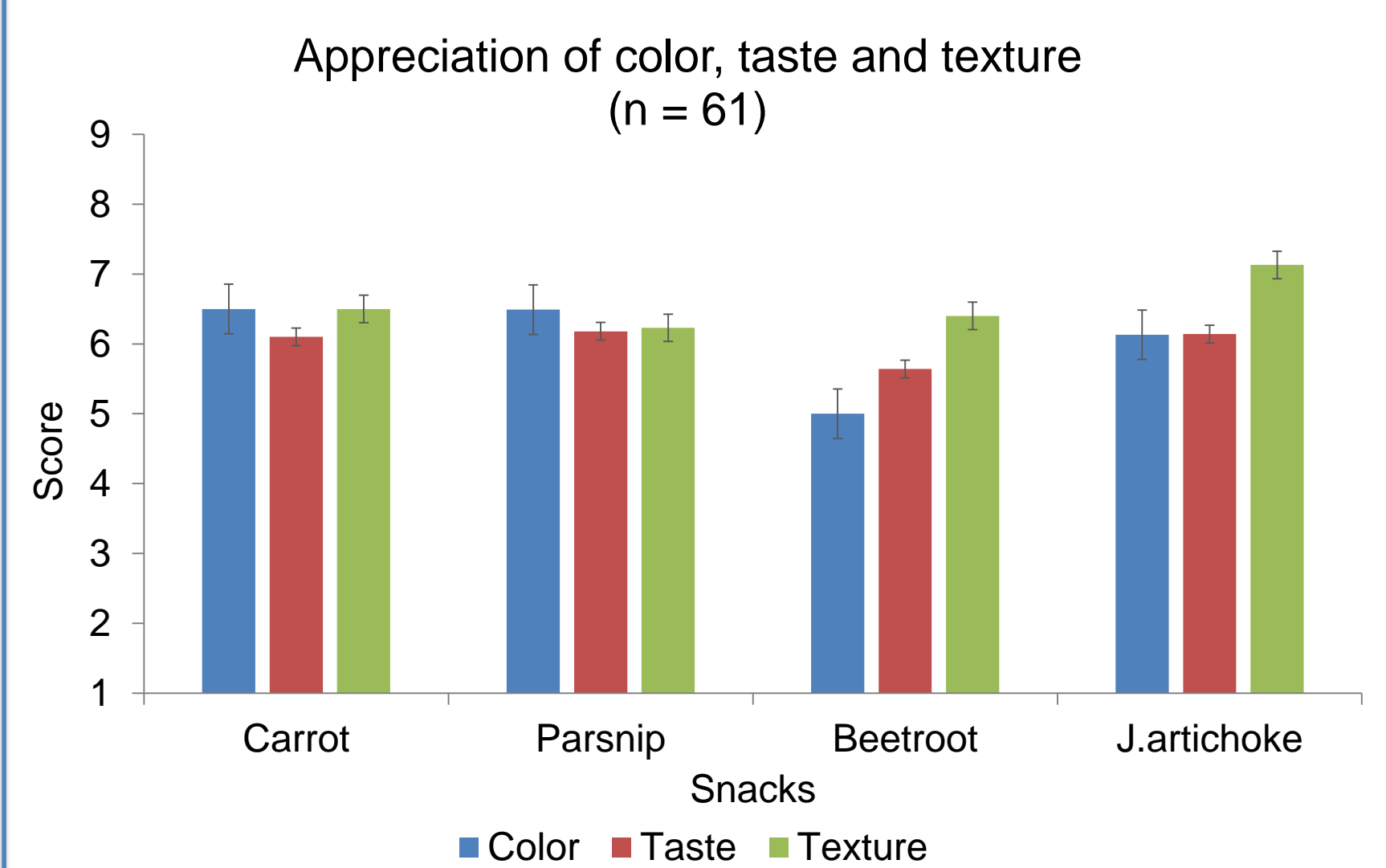
Nutrition claims

The snacks are:

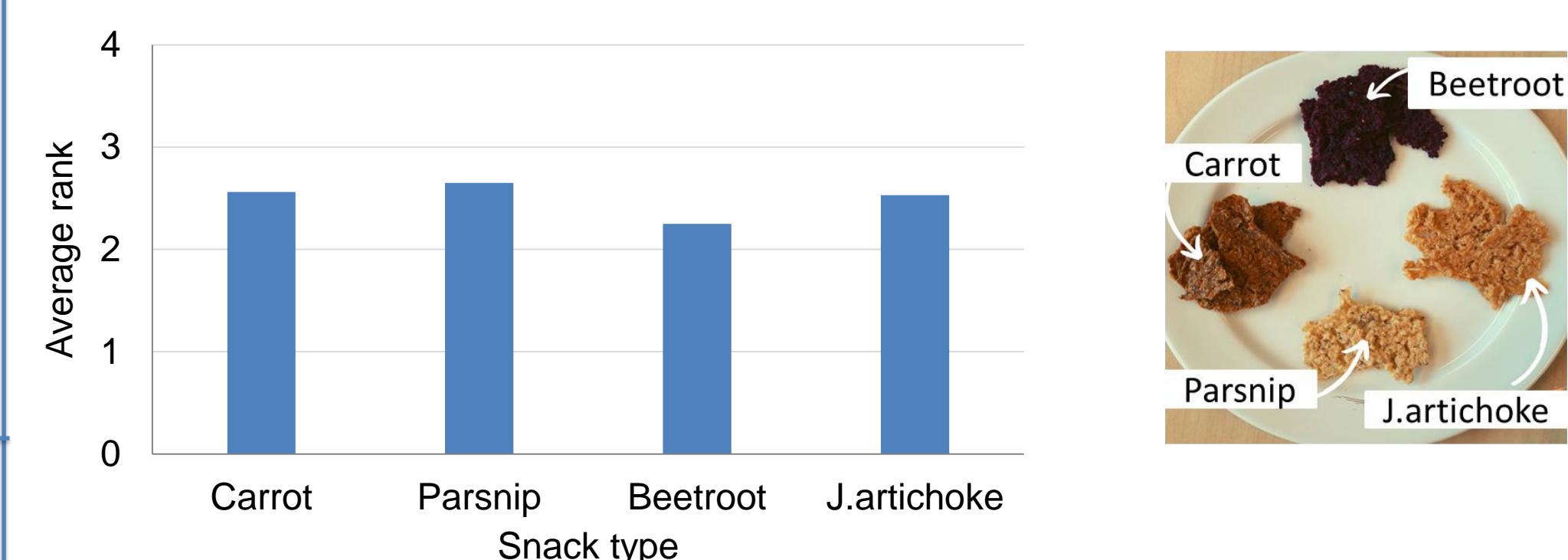
- ❖ A **source of protein** (at least 12 % of the energy value of the food is provided by protein)
- ❖ **High in fibre** (products contain at least 6 g of fibre per 100 g or at least 3 g of fibre per 100 kcal)
- ❖ **High in unsaturated fats** (> 70% of fatty acids in products are unsaturated and provide > 20% of energy of the product.)
- ❖ **High in omega-3 fatty acids** : EC claim valid for products with > 0,6 g alpha-linolenic acid per 100 g and per 100 kcal

Consumers' acceptance and preference

Moderate appreciation of product attributes



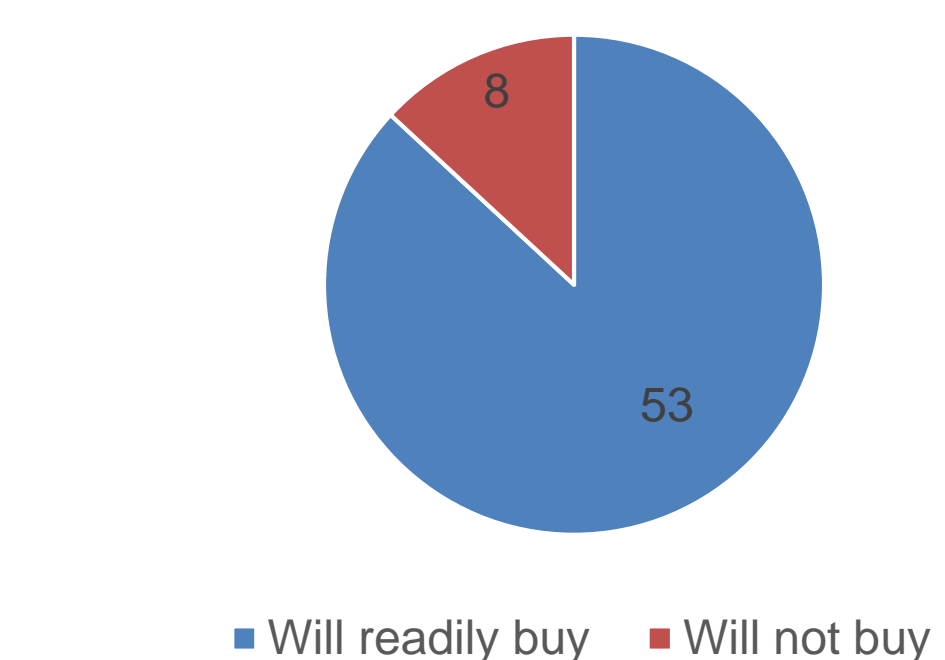
Ranking of snacks according to preference



Order of preference

Parsnip snack = Carrot snack = J. artichoke snack > Beetroot snack

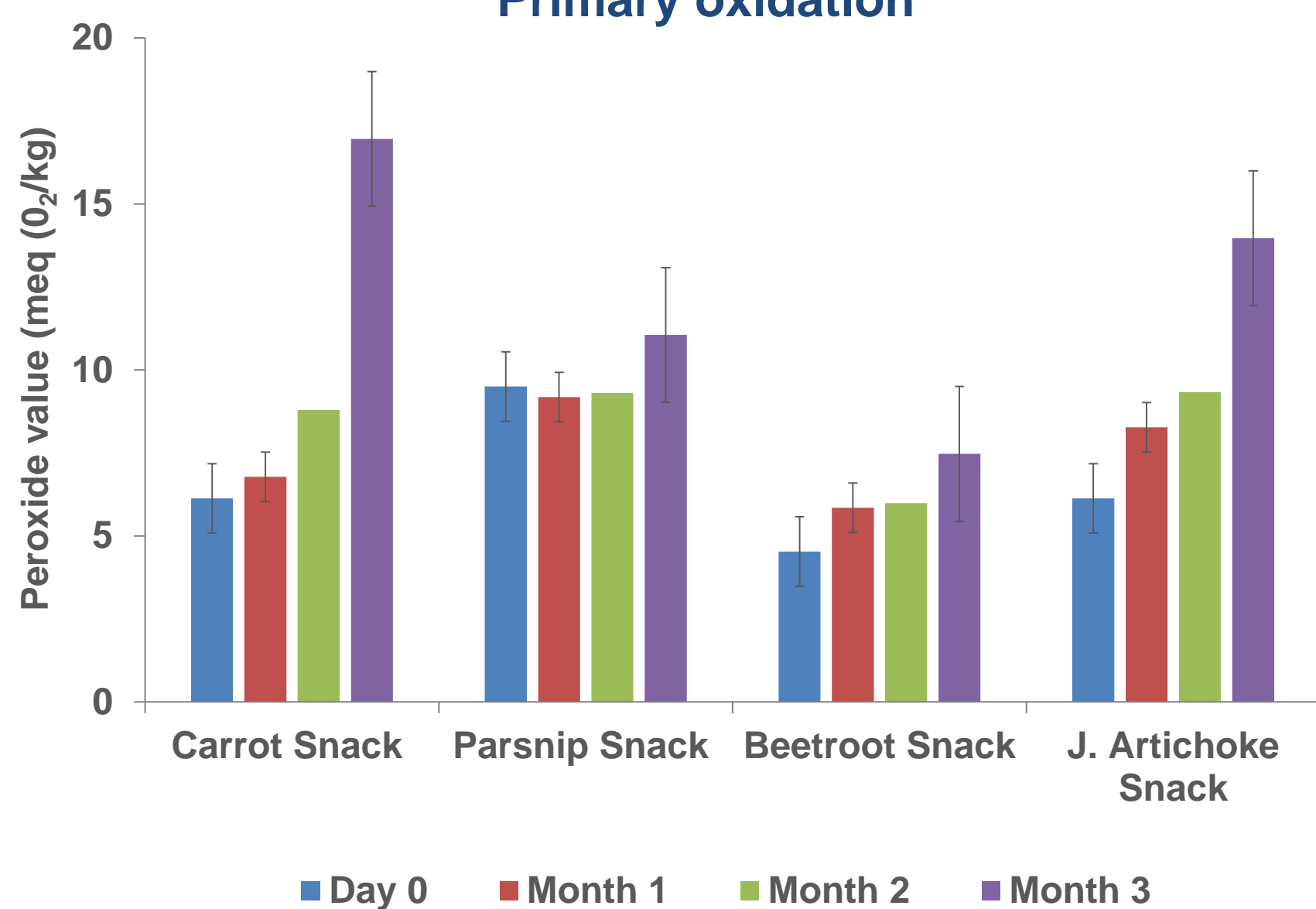
Consumers' purchase intention



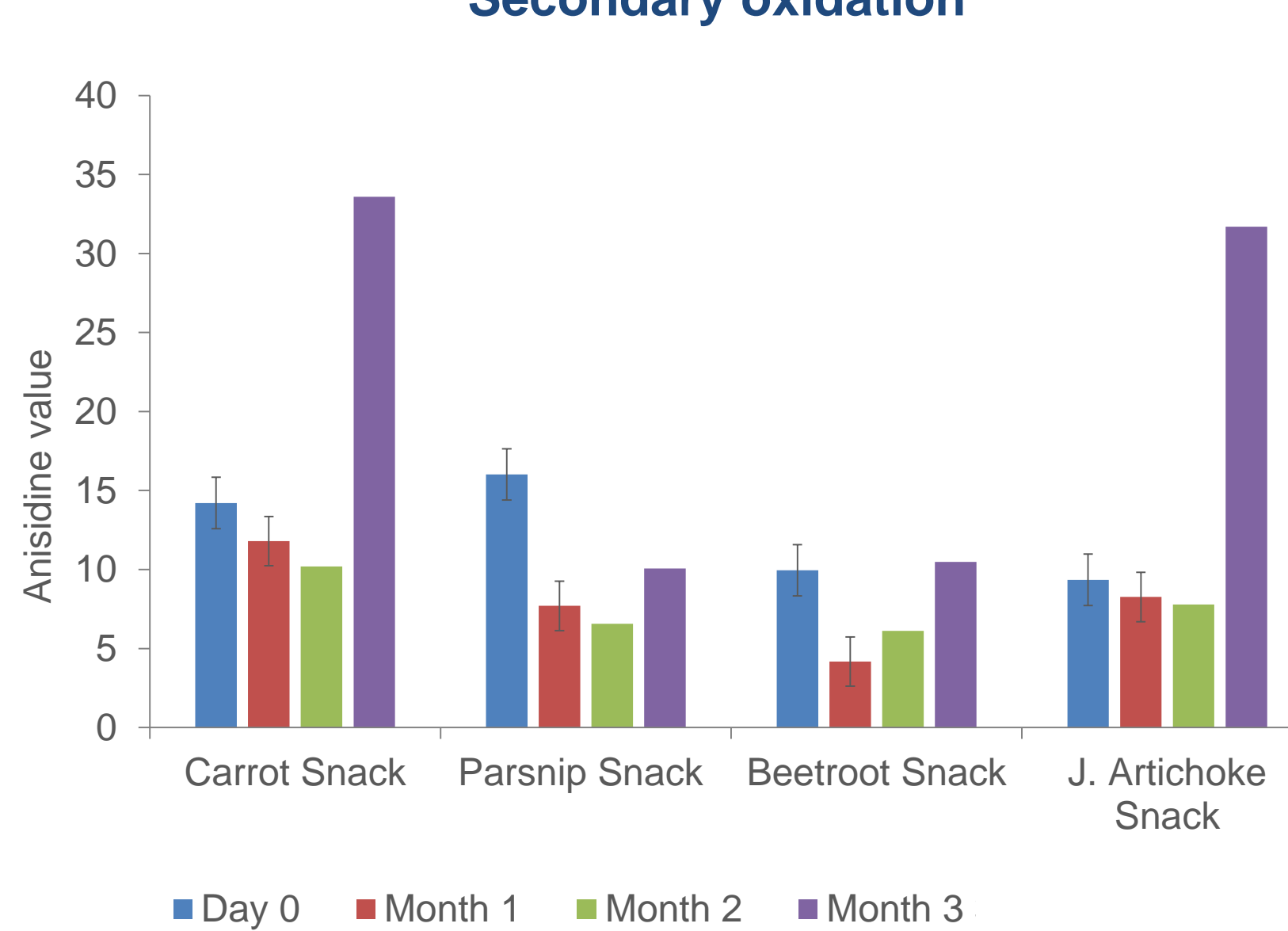
Will be readily purchased by 4 out of 5 tasters

Oxidative status of snacks during storage

Primary oxidation



Secondary oxidation



- ❖ After 3 months of storage, carrot and Jerusalem artichoke snacks had a noticeable rancid flavour corresponding to the higher peroxide and anisidine values

Conclusion

Acknowledgement

Hyper-nutritious snacks based on root vegetables and apples were conveniently developed and the formulation could be applied to other vegetables and fruits. The snacks were well appreciated by consumers and the storage studies revealed a shelf stability of 2 to 3 months. To improve marketability, we intend to optimize the baking process and the shelf stability of products.

We gratefully acknowledge the financial support from the Baillet Latour Fund.

We thank the Lauzelle Farm for providing the vegetables used in this study.

