

Evaluation of the functional potential of beverages made from regional plant matrices

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INTRODUCTION & AIM

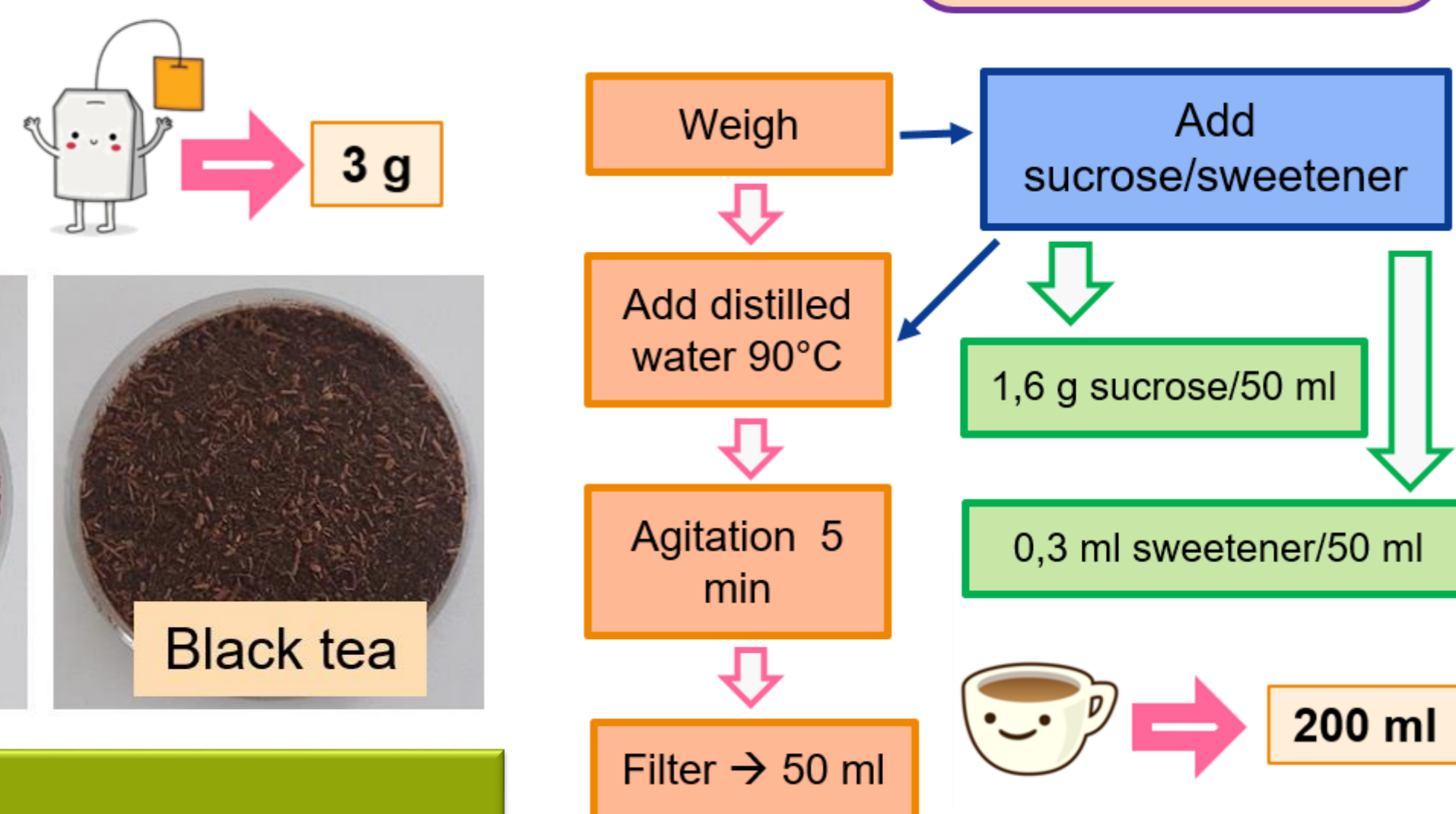
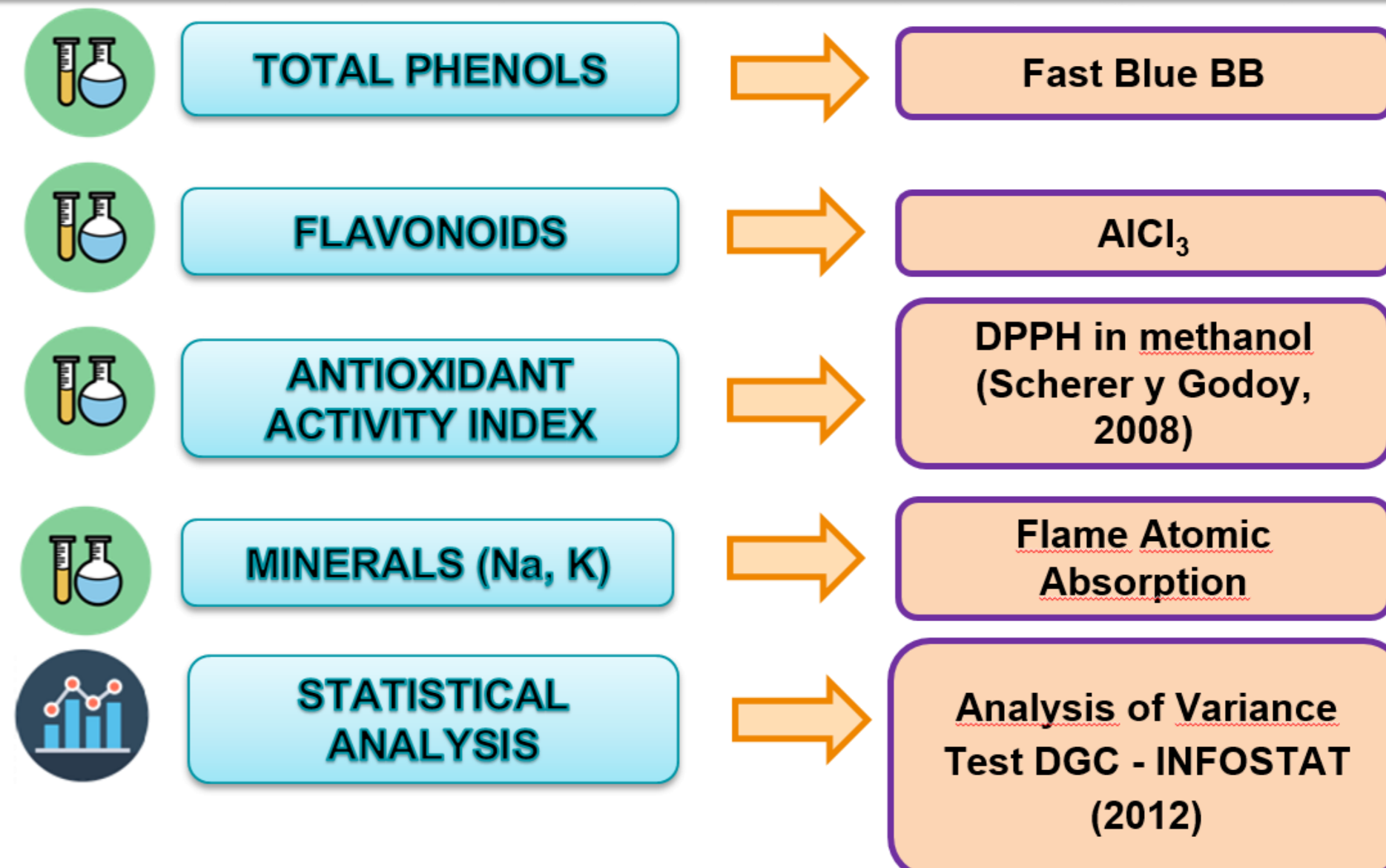
The Argentine Patagonian region offers abundant plant-based raw materials for functional foods and features a culture of high value-added food production. Tisanes are beverages made from various plant parts by infusion in hot water, with compositions varying by region, culture, and consumer preferences. The functional potential of tisanes made with black tea or rooibos and powdered Patagonian matrices (blueberry, rosehip, and yacon) was evaluated, as well as the impact of adding sucrose or a sweetener.

Extracts	RMD (g)	BD (g)	Y (g)	BT (g)	R (g)
Tisane BT	0,15	0,15	0,15	0,3	---
Tisane R	0,15	0,15	0,15	---	0,3

RMD: deshidratado rosehip, BD: deshidratado blueberry, Y: yacon, BT: black tea, R: rooibos. Tisane BT: made with BT, Tisane R: made with R



METHOD



RESULTS & DISCUSSION

Extracts	TP	Fv	AAI	Na	K
Tisane BT	67 ± 4 ^A	17 ± 1 ^b	4,32 ± 0,05 ^{A*}	4,4 ± 0,1 ^{b*}	153 ± 2 ^b
Tisane R	67 ± 3 ^A	21 ± 0 ^a	4,39 ± 0,10 ^{A*}	22,8 ± 0,1 ^{a*}	159 ± 1 ^a

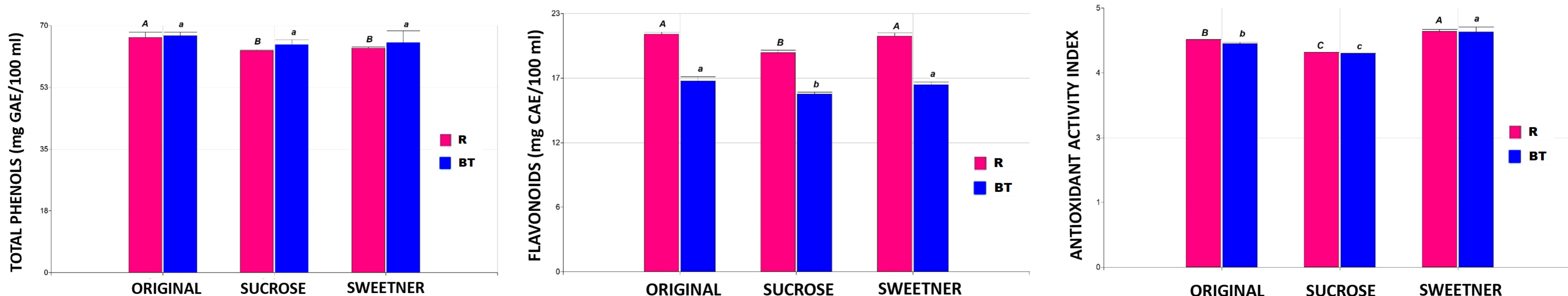
TP: total phenols (mg GAE/100 g), Fv: flavonoids (mg CE/100 g), AAI: antioxidant activity index, Na: Sodium (mg Na/kg), K: Potassium (mg K/kg). The values represent the average (n = 3) ± SD. Means with a common letter per column are not significantly different (p ≤ 0,05)

No significant differences were found in their TP concentration, which could contribute to a diet rich in phenols (over 600 mg/day).

The Fv concentration could be a significant dietary contribution, considering a daily intake in the range of 50-800 mg.

BT tisane → ↑ K and ↓ Na → 'low in sodium'
R tisane → ↑ Na due to its base matrix.

There were no significant differences in AAI, which was comparable to values of recognized antioxidant compounds.



The addition of sugar reduced the content of bioactive compounds, whereas the sweetener showed no significant differences from the original product. When evaluating AAI, it decreased in tisanes with sugar and increased in those with sweetener.

CONCLUSION

Currently, products with similar characteristics are not available in the Argentine market. Therefore, there is an opportunity to add value to local production (yacon, berries, rose hips), producing functional foods that allow for beneficial effects on the health of consumers who go beyond traditional nutritional requirements.