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Mixed beverage involving acetic fermentation of cashews with apple juice and grape juice: assessing antioxidant activity

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INTRODUCTION & AIM

- ✓ Acetic fermentates from fruits and grains are widely consumed but usually have low commercial value.
- ✓ Combining them with natural juices may enhance flavor and functional properties, adding value to regional products.
- ✓ Cashew fermentate, rich in vitamin C and phenolic compounds, was combined with apple and grape juices, both known for their antioxidant potential.

To evaluate the antioxidant activity and total phenolic content of mixed beverages prepared with acetic fermented cashew juice and commercial apple or grape juices.

METHOD

Formulations:

- ➢ BMA (Cashew + Apple): 15:85 (v/v)
- ➢ BMG (Cashew + Grape): 15:85 (v/v)

Cashew fermentate standardized to 4% acidity.
Stored under refrigeration.

- ➢ Analyses:Total Phenolics (mg L^{-1})
- ➢ Antioxidant Activity:
- ➢ DPPH (µM Trolox equivalents)ABTS (µM Trolox equivalents)

RESULTS & DISCUSSION

Beverage	Phenolics (mg L^{-1})	DPPH (µM)	ABTS (µM)
BMA	102.24 ± 0.46	1270.92 ± 0.48	2077.00 ± 0.41
BMG	92.13 ± 0.61	1260.92 ± 0.39	2279.22 ± 0.46

- ✓Both formulations showed high antioxidant activity, demonstrating the synergistic effect of mixing fermented cashew with fruit juices.
- ✓The ABTS method indicated higher antioxidant capacity compared to DPPH, likely due to different reaction mechanisms.
- ✓The BMA beverage had higher total phenolics, while BMG had stronger ABTS activity.

CONCLUSION

- ✓ Mixed beverages based on acetic fermented cashew and fruit juices exhibit functional potential due to strong antioxidant properties.
- ✓ These formulations can contribute to regional development by valorizing cashew pseudofruit and promoting sustainable product innovation.

REFERENCES

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