

Anthocyanin-Based Dietary Supplements in the Australian Online Market: Composition, Formulation, and Health Claims



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Background & Aim

- **Market growth:** Anthocyanin products expanding at 4.3% annually (2022-2032)
- **Health benefits:** Anti-inflammatory, antioxidant, cardioprotective, neuroprotective properties
- **Knowledge gap:** Limited data on Australian anthocyanin supplement market composition
- **Study aim:** Comprehensive analysis of anthocyanin supplements available online in Australia (July–August 2024)



Methods

- **Data sources:** iHerb, Amazon Australia, Google searches
- **Inclusion criteria:** Plant-derived, single-ingredient supplements
- **Final dataset:** 121 unique products analysed
- **Parameters assessed:** Origin, sources, delivery formats, extract concentrations, anthocyanin content, health claims, serving sizes, pricing

Country of Origin

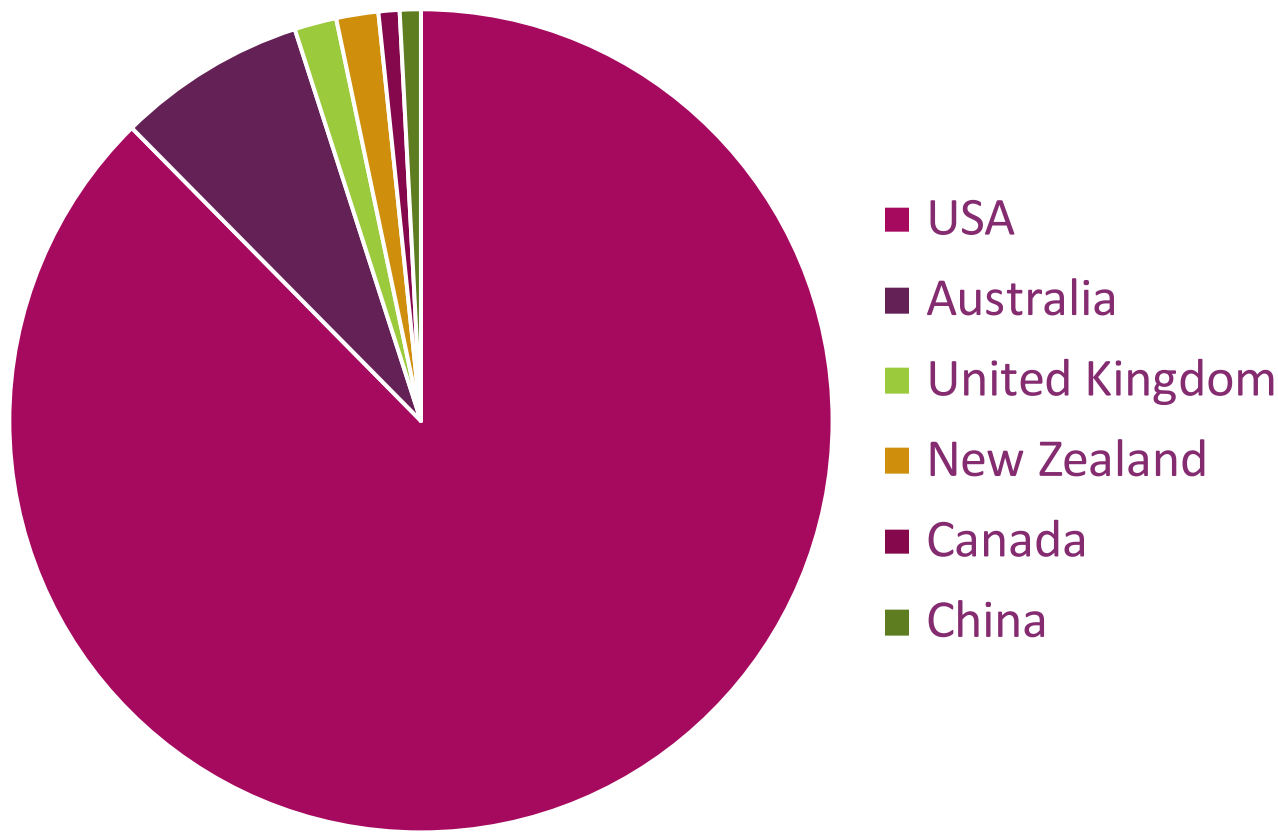


Figure 1. Country of origin distribution for anthocyanin-based supplements available in the Australian online market (n=121).

Top Anthocyanin Sources

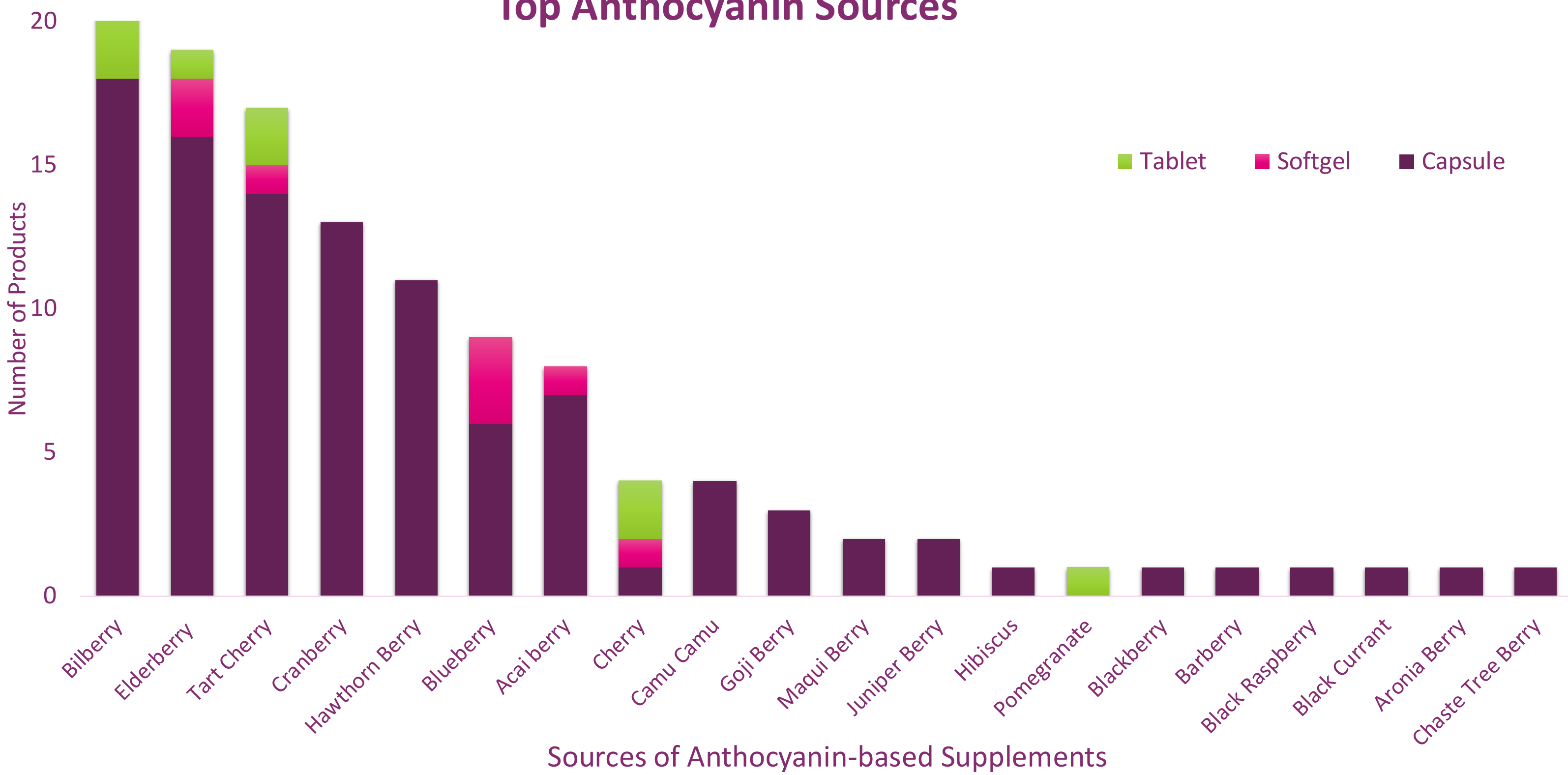


Figure 2: Distribution of anthocyanin-based supplements by plant source and delivery format (n=121)

Serving Sizes

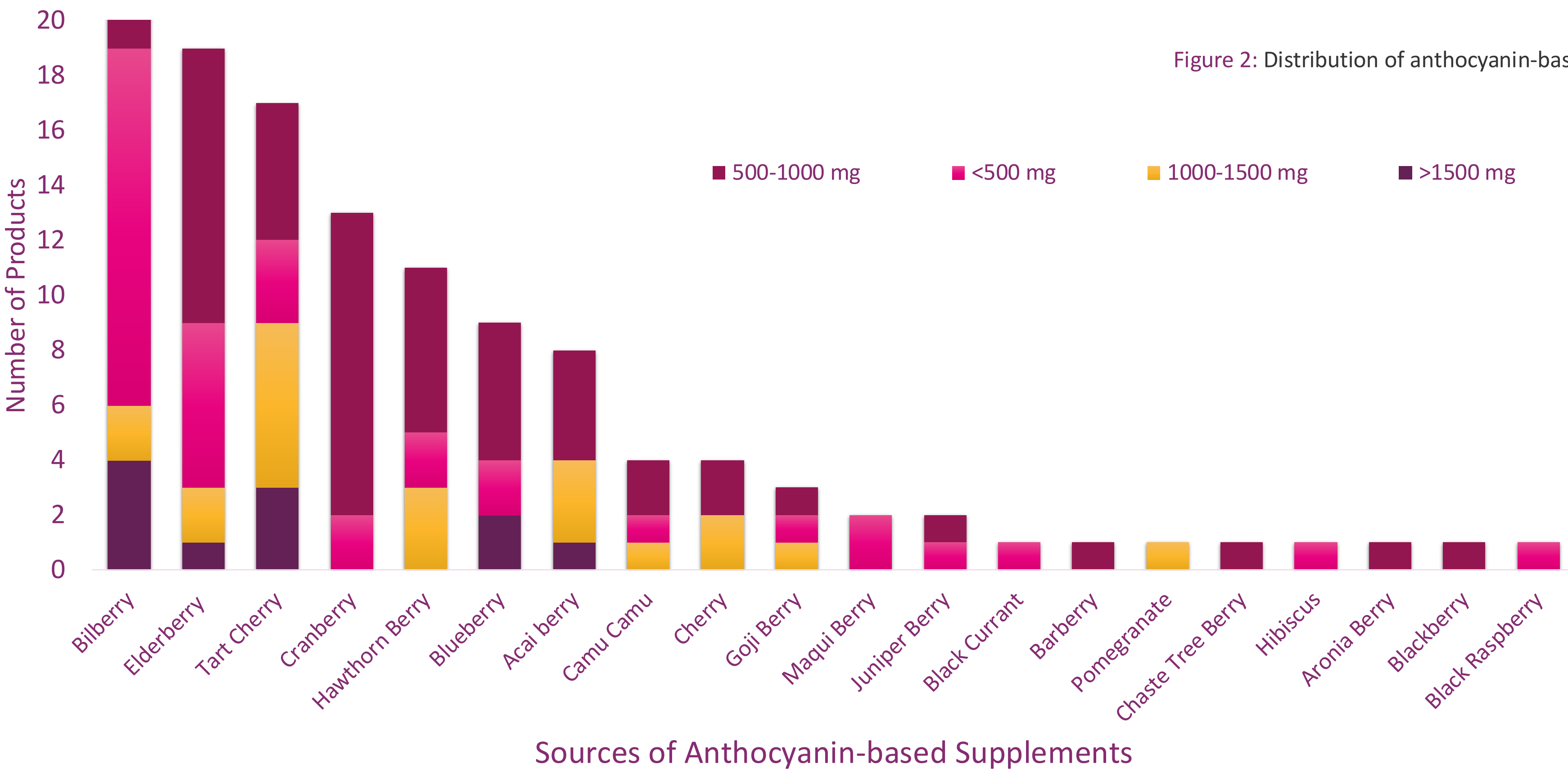


Figure 3: Distribution of anthocyanin-based supplements by plant source and serving size (n=121)

Health Claims

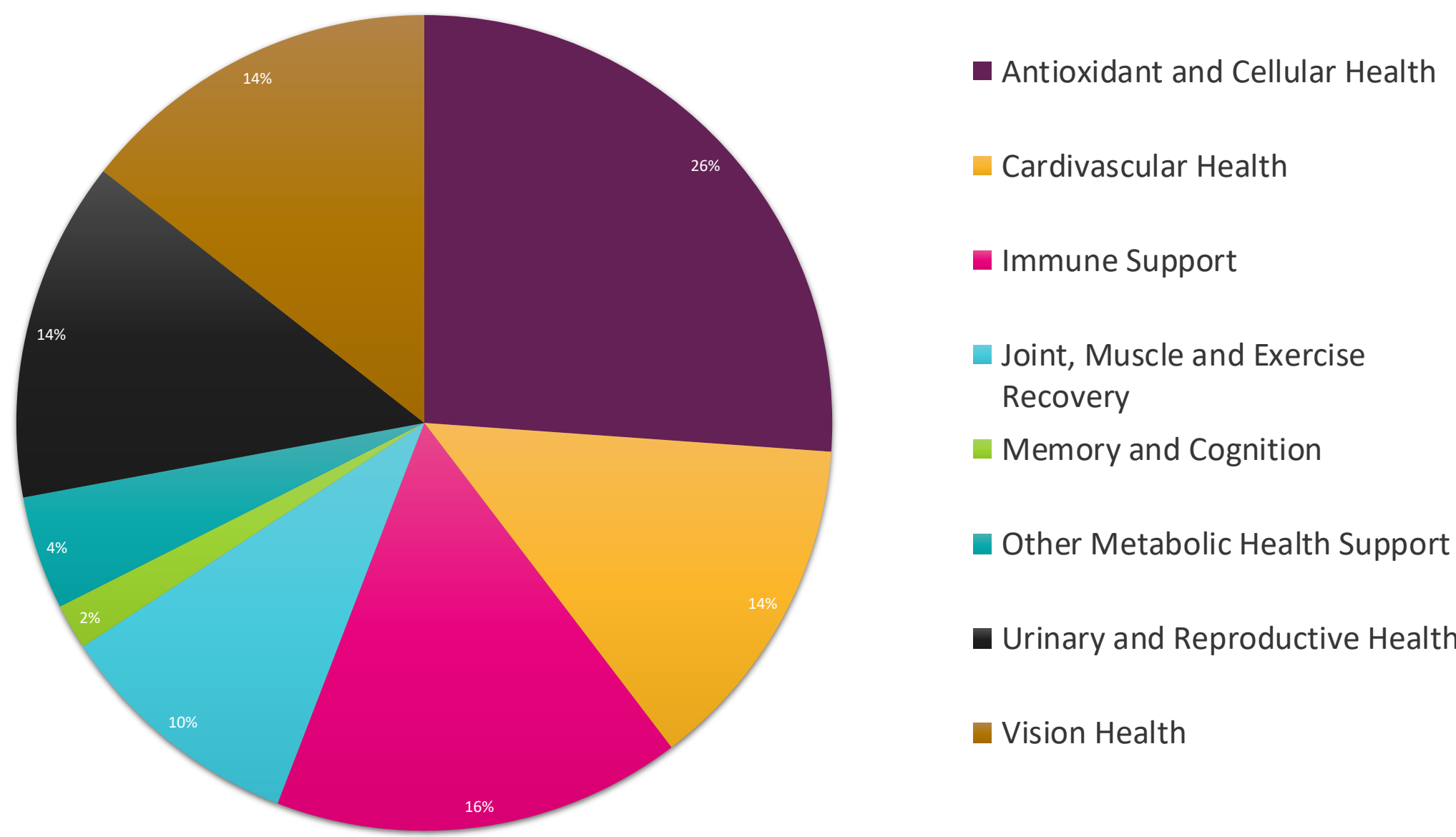


Figure 4: Distribution of health claims reported by anthocyanin-based supplements (n=84 products reporting claims)

Anthocyanin Content

- Only 12% of products report levels
- Range from 0.1% to 39%
- Bilberry dominates data, with common levels at 25% and 36%
- Other sources include tart cherry, blueberry, elderberry, cherry

Transparency Gaps

- 58% products do not disclose extract concentration
- 88% do not disclose anthocyanin content
- When disclosed, anthocyanin content ranges 0.1%-39%

Pricing

- Average price: A\$0.78/g
- Range: Bilberry up to A\$7.40/g; Tart cherry as low as A\$0.02/g
- 81% priced low (0-2.5 AUD/g)
- Mid and high price segments smaller fractions



Key Findings & Implications

- **Market dominance:** US products account for 87% of Australian online market
- **Top sources:** Bilberry, elderberry, tart cherry collectively represent 47% of products
- **Critical transparency gap:** 58% do not disclose concentration; 88% do not disclose anthocyanin content
- **Variable evidence quality:** Strong for cranberry (UTI) & tart cherry (joints); weak for bilberry (vision)
- **Wide price variability:** A\$0.02-7.40/g; bilberry most expensive, tart cherry most affordable
- **Regulatory concern:** Need enhanced FSANZ scrutiny of imported online products to ensure compliance
- **Consumer impact:** Limited labelling information hinders informed purchasing decisions
- **Standardization needed:** Validation using chromatography for extract concentrations and anthocyanin content
- **Health claims widespread:** 69% report claims with varying scientific support; mostly general-level claims

Extract Concentrations

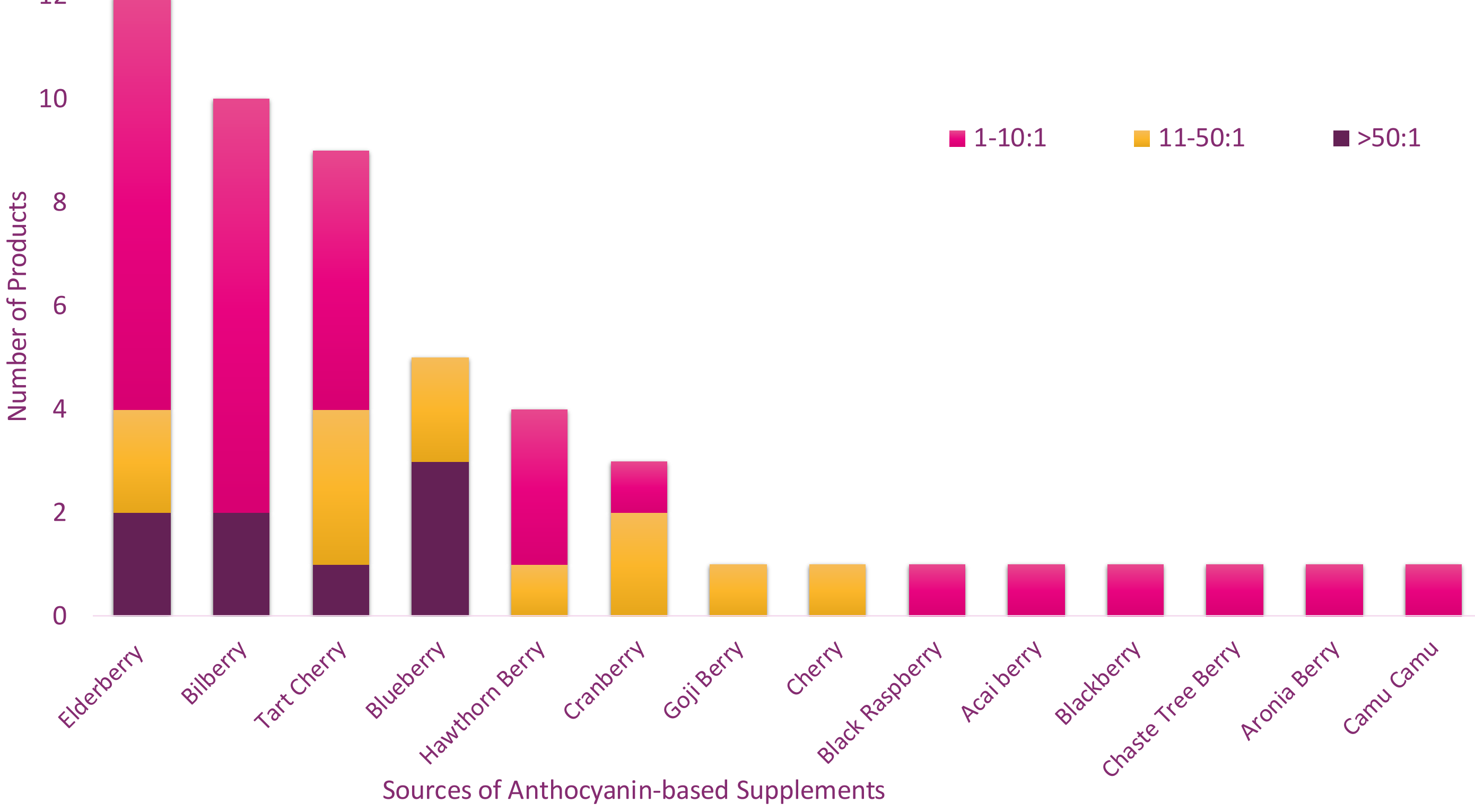


Figure 5: Distribution of extract concentration ratios by plant source (n=51 products disclosing concentration)

Conclusion

Critical transparency gaps (58% undisclosed concentrations, 88% undisclosed content) hinder informed consumer choices. Enhanced FSANZ oversight and standardized reporting urgently needed for product comparability and safety. Stronger regulatory collaboration essential to protect consumers in this rapidly growing, US-dominated online supplement market

References

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