Why do some people experience flavour from glucosides while others don’t?

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Aim: To understand what determines flavour perception from glucosides: 1. release of odorant by saliva, or 2. odorant perception?

Glucosides are important varietal precursors, produced in grape berries as non-volatile, odourless compounds which can be broken down by salivary enzymes to release volatile odorants, perceptible retronasally, contributing to persistent flavour.

But not everyone can perceive flavour from glucosides.

2. Is the sensory detection threshold of the odorant the key?

1. Is flavour from glucosides limited by odorant release by saliva?

- 23 individuals
- Geranyl glucoside (3 mg/L)
  - 11 ‘tasters’ perceived fruity flavour
  - 12 ‘non-tasters’ perceived no flavour
- Guaiacyl glucoside (0.5 mg/L)
  - 16 ‘tasters’ perceived smoky flavour
  - 7 ‘non-tasters’ perceived no flavour
- Triplicate samples
- Compared to water control

No. Saliva release does not correspond to taster type

Yes. Sensory retronasal detection thresholds determine perceived flavour from glucosides

Conclusion:
- Flavour from glucosides is determined by the ability to perceive the odorant and not release by saliva.
- Glycosides are perceptible by most people, in some cases at surprisingly low concentrations.

Acknowledgements Sensory panellists and AWRI colleagues, Lisa Pisaniello and Louisa Schueth, UniSA, ethics approval 000003539