

DNA sequencing methods for determining the floral origin of Honey



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$\frac{2}{x}$ Honey origin

- Monofloral vs multifloral
- Consumer satisfaction
- Effective marketing

3



Traditional method

Melissopalynology

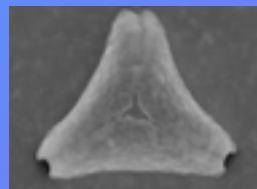
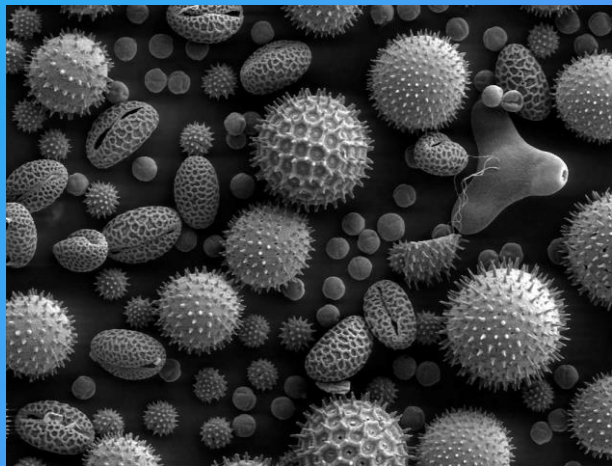


4



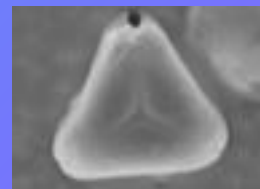
Traditional method

Melissopalynology



Mānukā

\$142/kg



Kānukā

\$69/kg

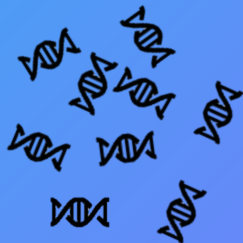
5

—x—

DNA Sequencing



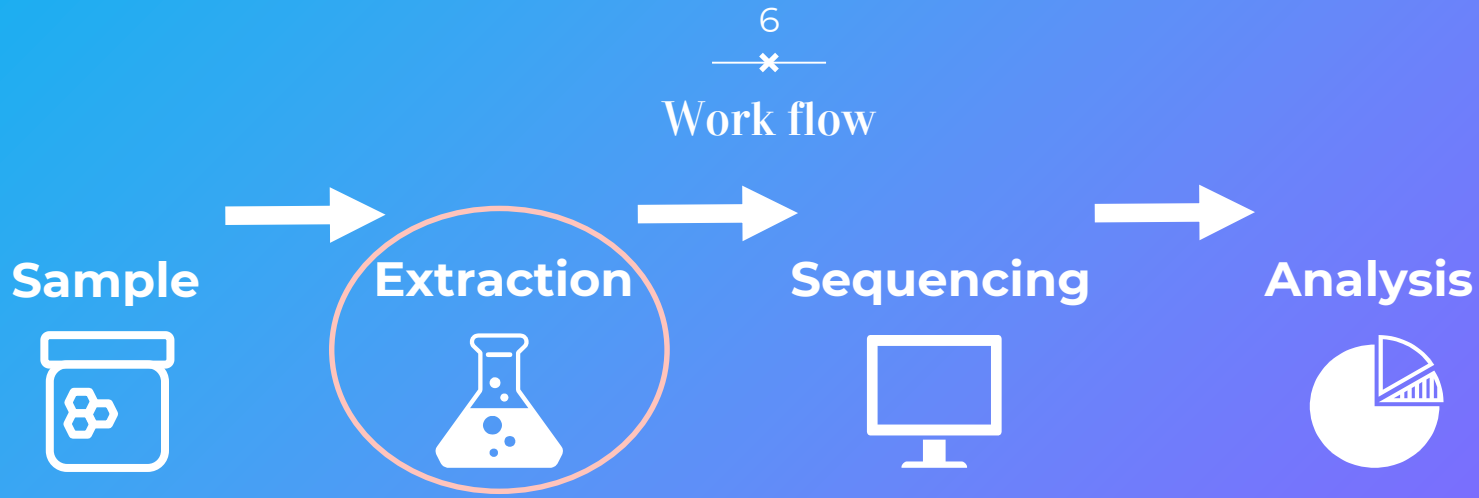
Sample



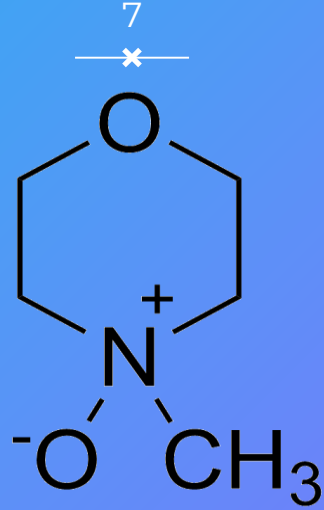
Assign



Quantify



Traditional extractions can be long, toxic and difficult to adapt to automation



~~4-methylmorpholine N-Oxide monohydrate~~

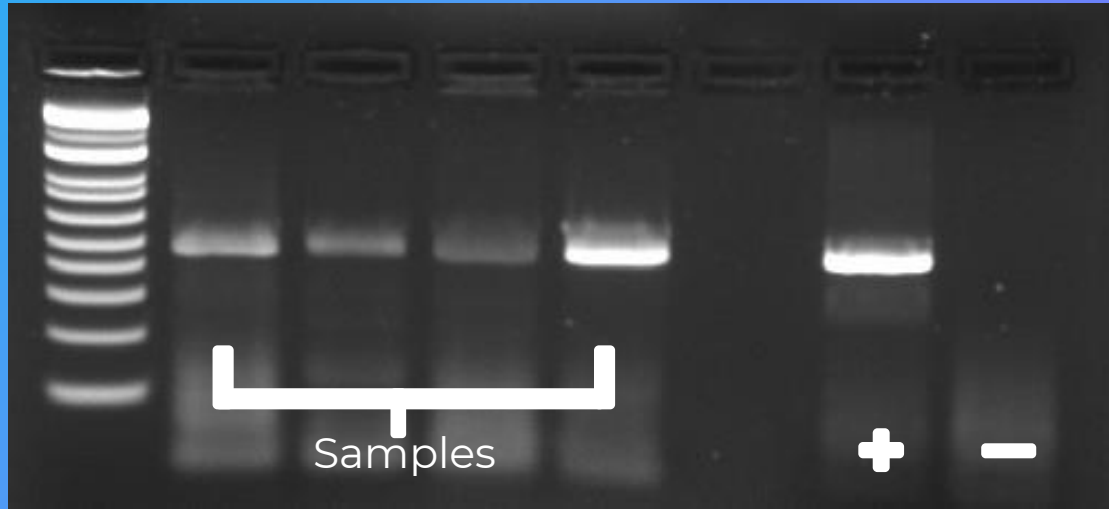
MNNO



- **Commonly used in textile industries to degrade plant material**
- **Relatively cheap**
- **Comparatively quick and easy extraction**

9
—x—

PCR with MNNO



10



Automation





Final points

Honey floral origin is important for producers and consumers

One of the only ways to verify this is through pollen identification

The easier we can do this in the lab, the more applicable it is for you



Acknowledgements

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13



Thanks

ANY QUESTIONS?

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