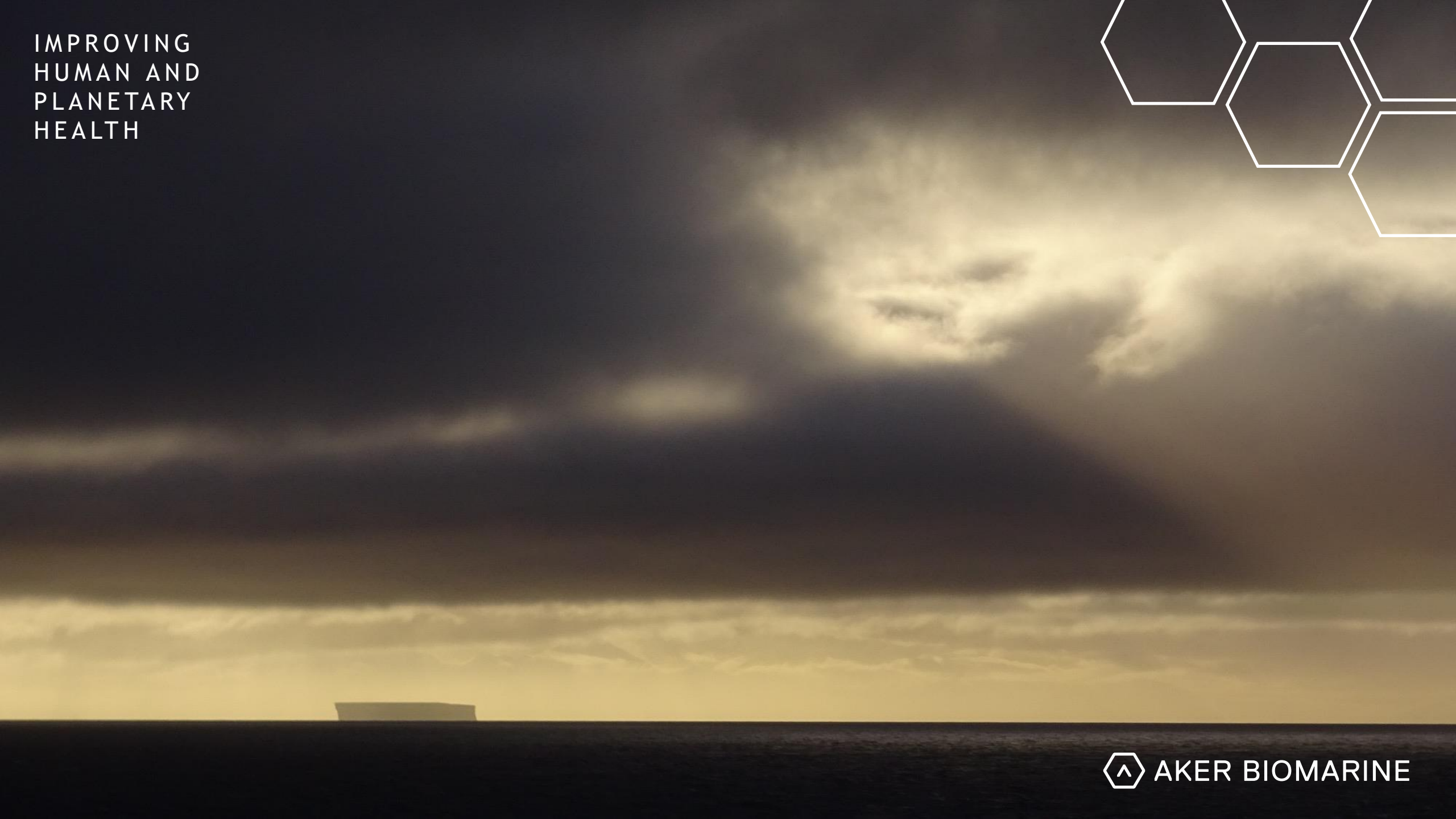

IMPROVING
HUMAN AND
PLANETARY
HEALTH
AKER BIOMARINE

Agenda

- Desktop stability calculator for bulk krill oil
- Krill oil capsule overfill calculator

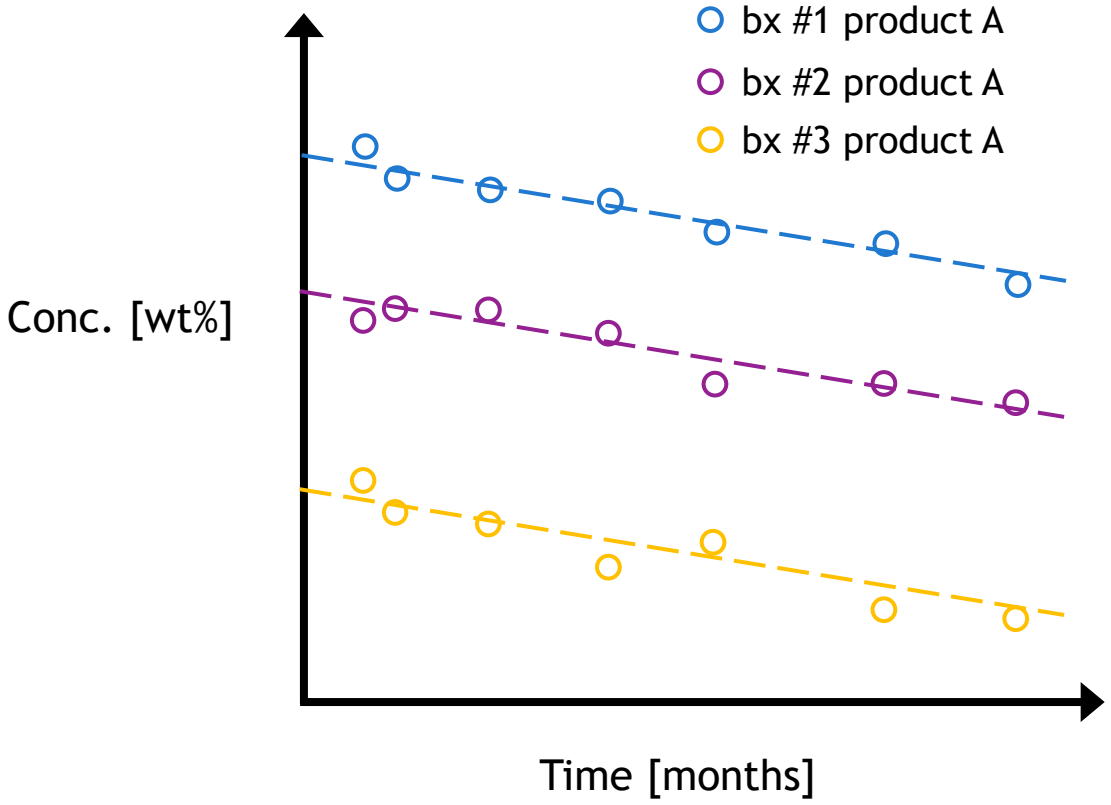
AKER BIOMARINE

AKBM stability calculator for bulk krill oil

- Background & motivation
  - Want to learn JSL
  - I work for a krill fishery, which produces krill oil for food supplements, for which I manage stability studies
  - Have 36-month stability data but use frequently only 24-month shelf-life
  - Covid-19 led to build-up of stock both in our and customer warehouses
  - Needed a tool to quickly assess viability of individual krill oil batches for assessing potential for shelf-life extension
    - NB: A natural product will obviously have some variation in certain parameters
  - Wanted a tool to democratize stability data and show what is possible with JMP

AKBM stability calculator for bulk krill oil

- Krill oil is a natural product with varying concentration levels
- Consequentially, stability time series start at different levels



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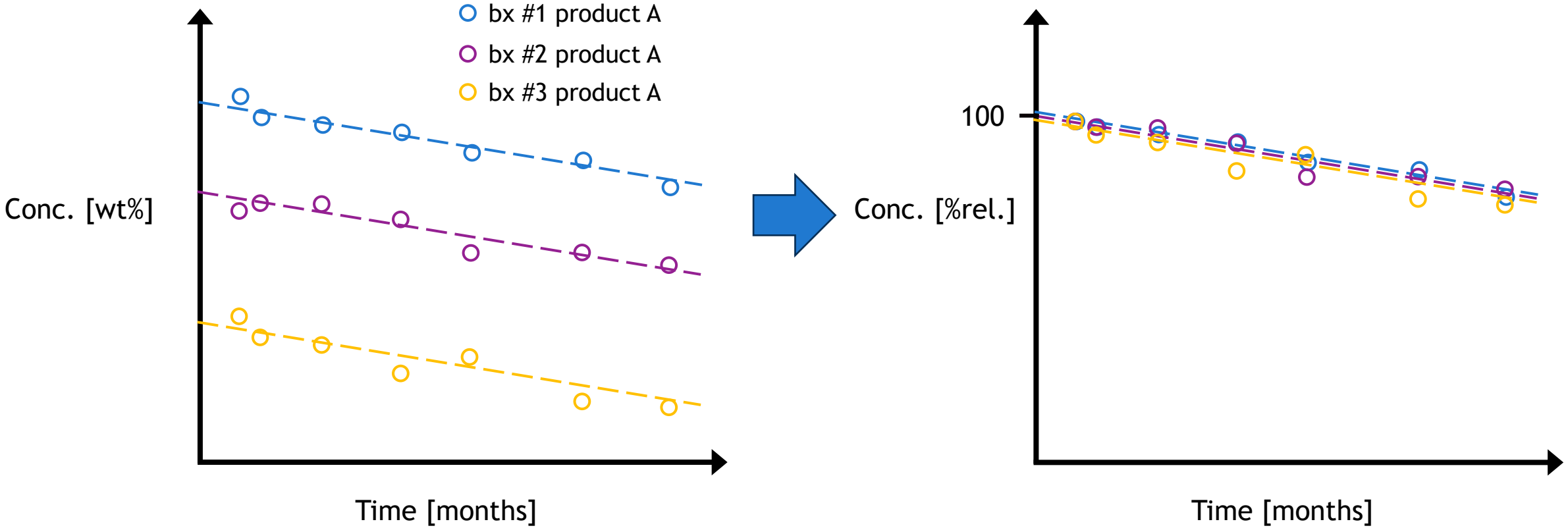
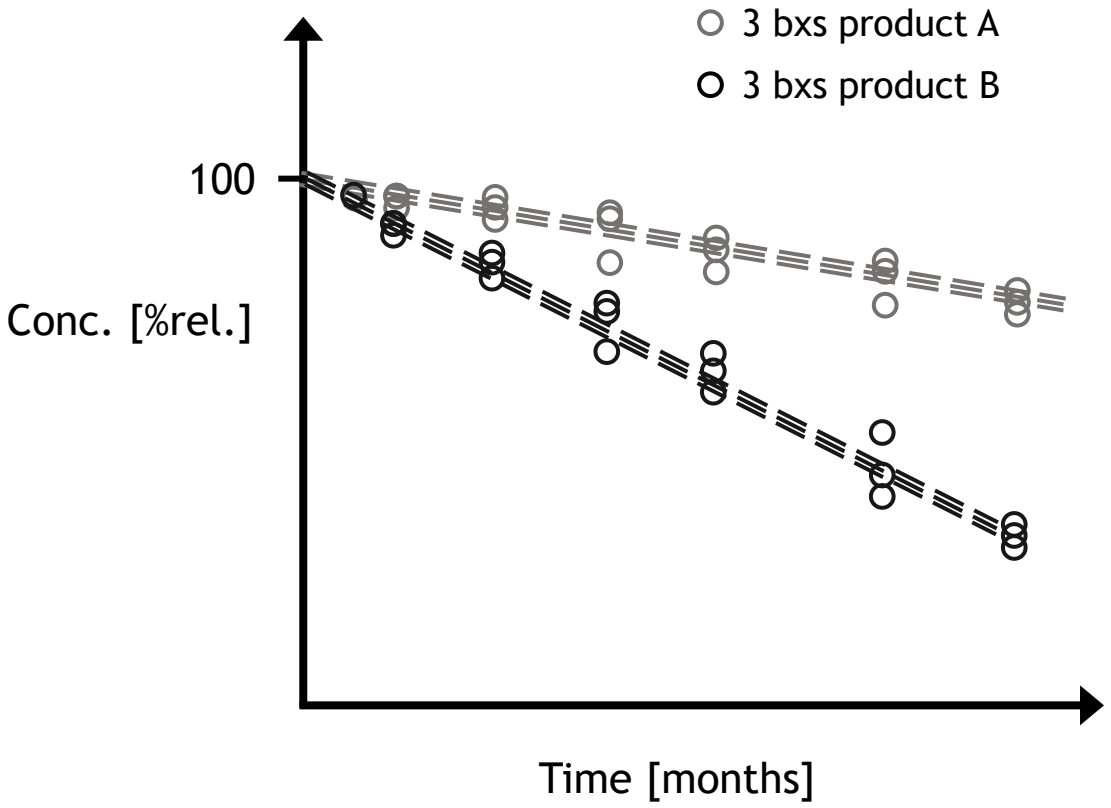
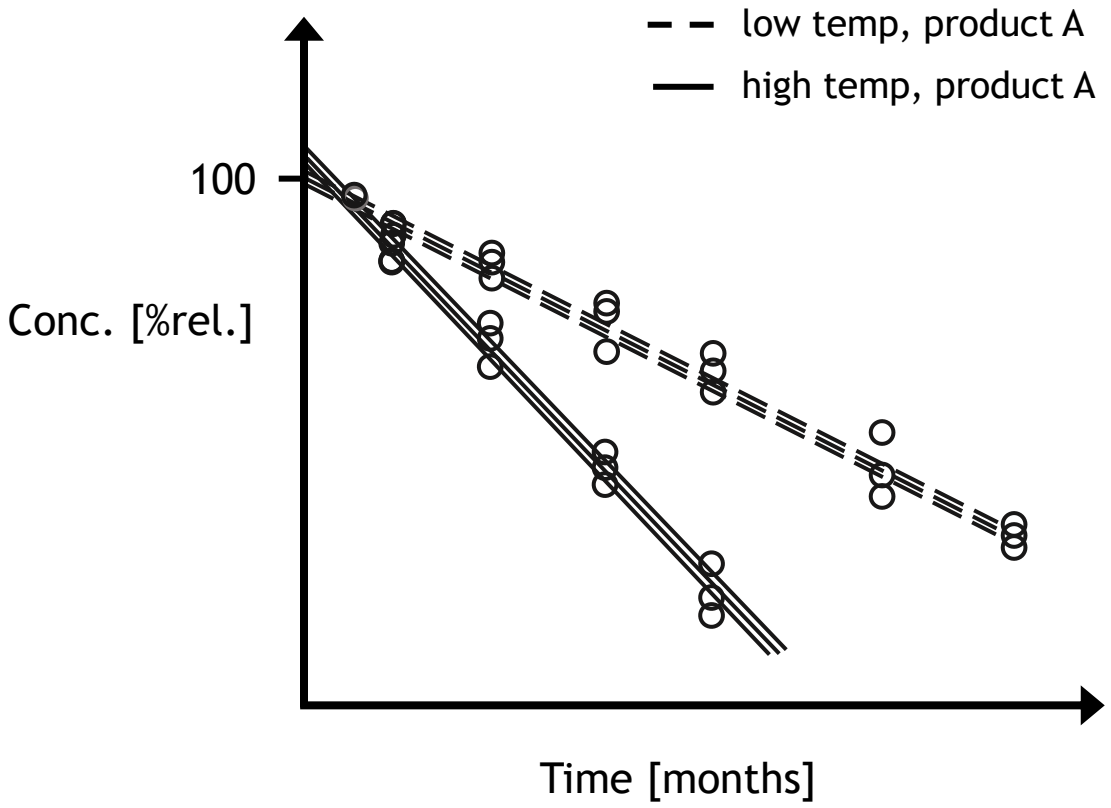


AKBM stability calculator for bulk krill oil

- Differences in stability data between products & storage conditions

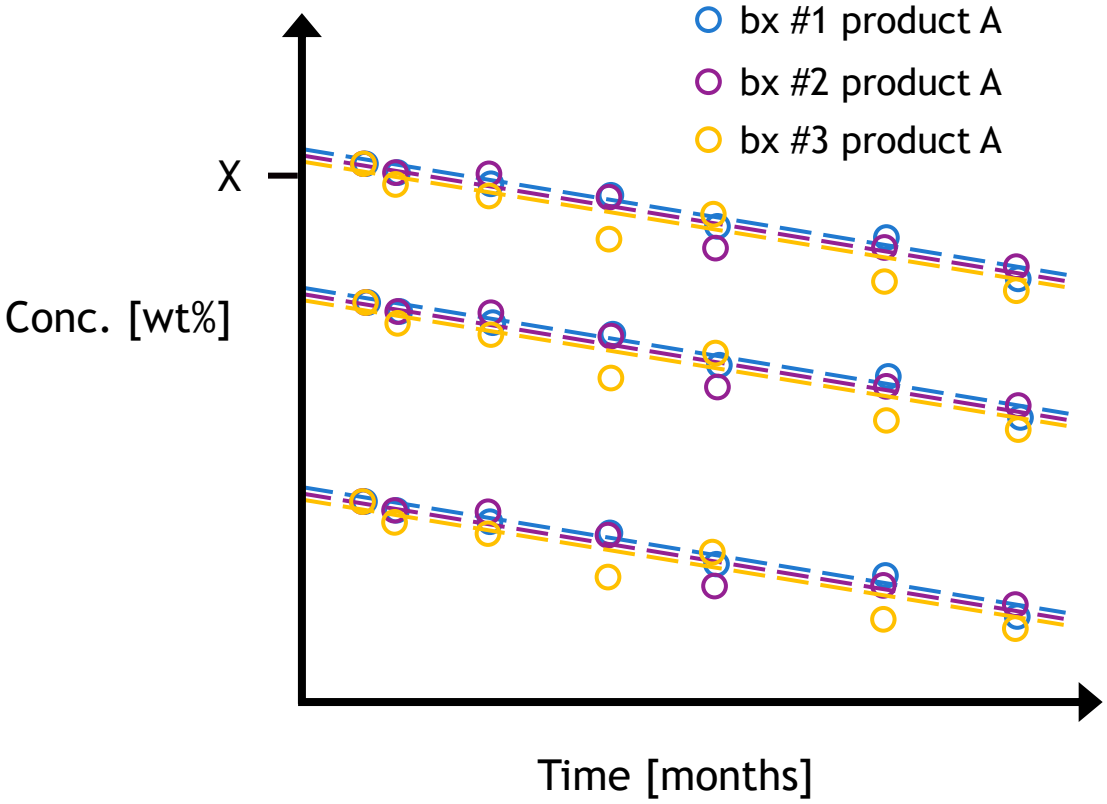


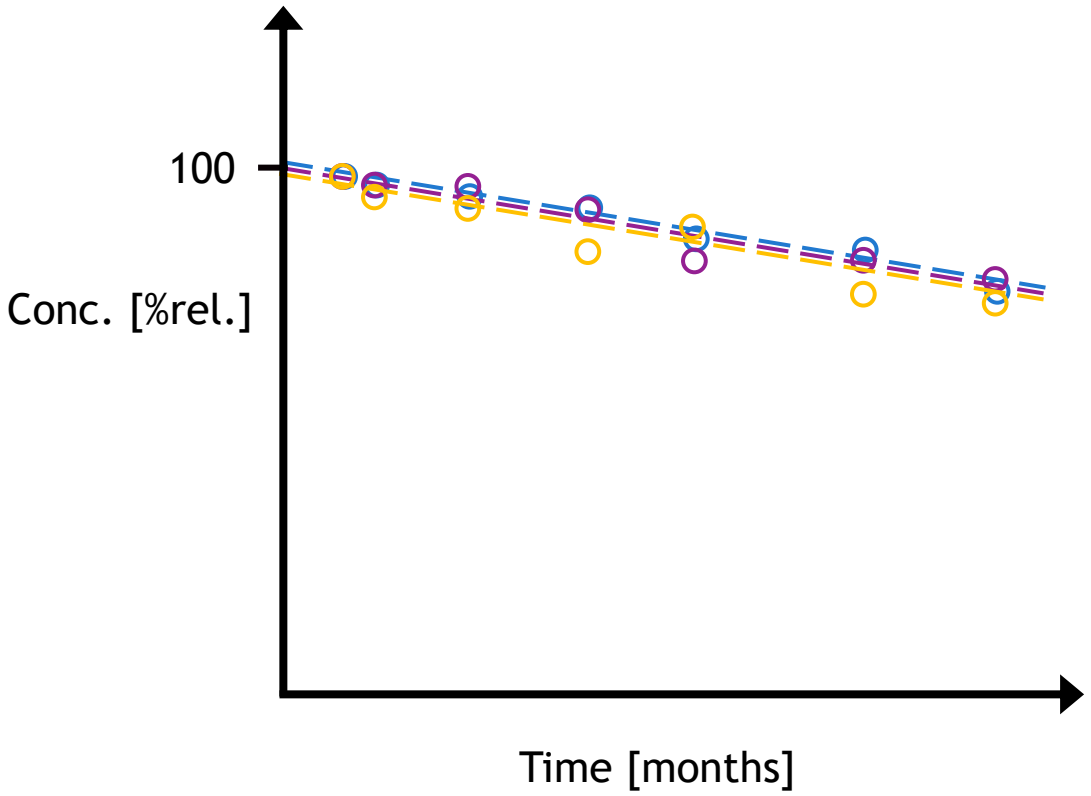


AKBM stability calculator for bulk krill oil

Warning: there are issues with this approach, meaning, it is not statistically sound!

- Once the stability is standardized, it can be re-standardized to any value
- This is (basically) what the stability calculator does





AKBM stability calculator for bulk krill oil

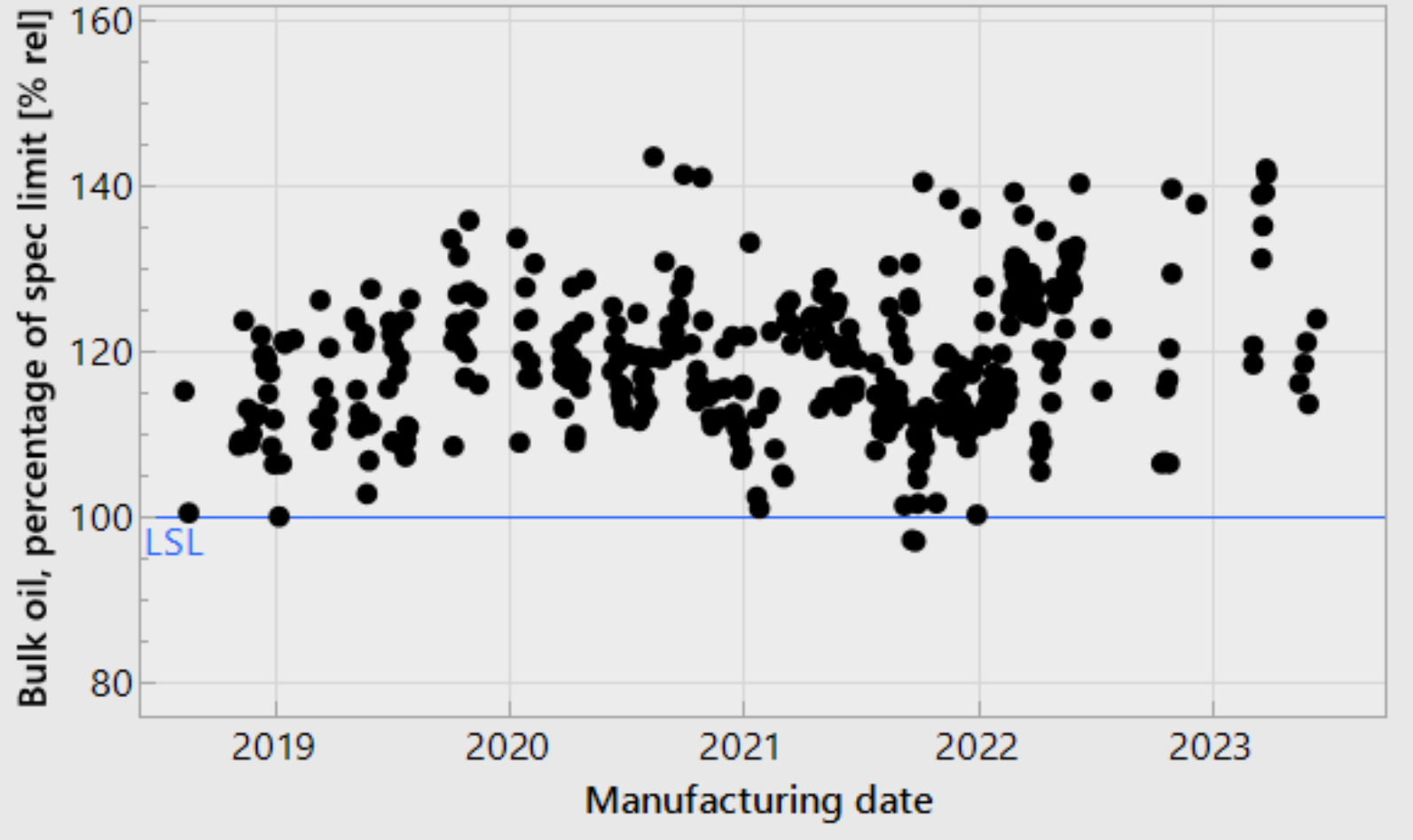
- How does it work / infrastructure
  - All QC data is in Google Cloud platform (“BigQuery”)
  - JMP connects via ODBC
  - Calculator written in JSL embedded in buttons in JMP Journal

AKBM stability calculator for bulk krill oil

- Currently built as JMP Journal following approach by David Burnham & using a lot of help from JMP community
  - http://www.pega-analytics.co.uk/blog/
  - https://community.jmp.com/
- Jarmo, special thanks to you too!
  - JMP Scripters Club
- Per Vase's article on shelf-life on LinkedIn (calculator was built before article was published)
  - https://www.linkedin.com/pulse/you-having-issues-shelf-life-studies-per-vase/
  - Need to think about this and a few other sins for v2 of the calculator

Capsule overfill calculator

- Some active component level in krill oil



Improvements

- Desktop stability calculator
  - Feed standardized data into *Stability* module (obviously)
  - Let JMP loop through a list of parameters and batches, and tabulate shelf-life estimates
  - Expand to other products
  - Add effects of temperature and water as continuous factors
  - Make this an add-in

- Capsule overfill calculator
  - Update models from cloud