

# A Few Years in the Life of a Mānuka Honey Stored at 21°C



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## BACKGROUND

This honey was harvested from the central North Island in late 2013.

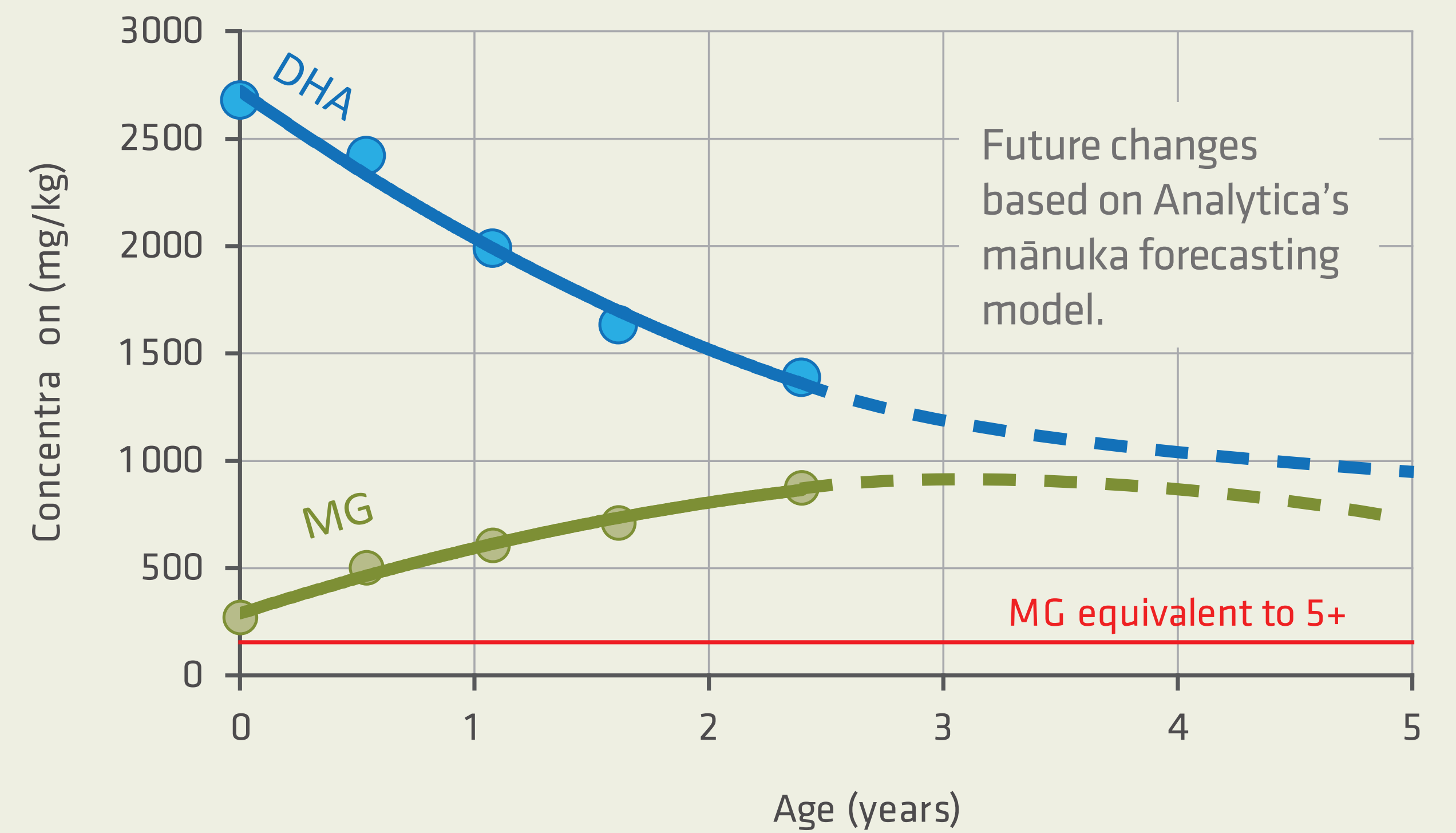
Analytica stored a large sample of the honey in an incubator at a controlled 21°C. It was regularly sub-sampled and tested to build up a picture of how mānuka honey changes over time.

Each time it was sub-sampled for testing, some of that sub-sample was frozen at -80 °C for future use. Recently Analytica retrieved some of these frozen samples to see how the UMFHA chemical marker leptosperin, and MPI's proposed 5 attributes of mānuka honey, had changed over time in this sample.

Please note: Mānuka pollen DNA test results are based on the test released by MPI in April 2017. MPI are working on changes to this test, and results could differ in future because of this.

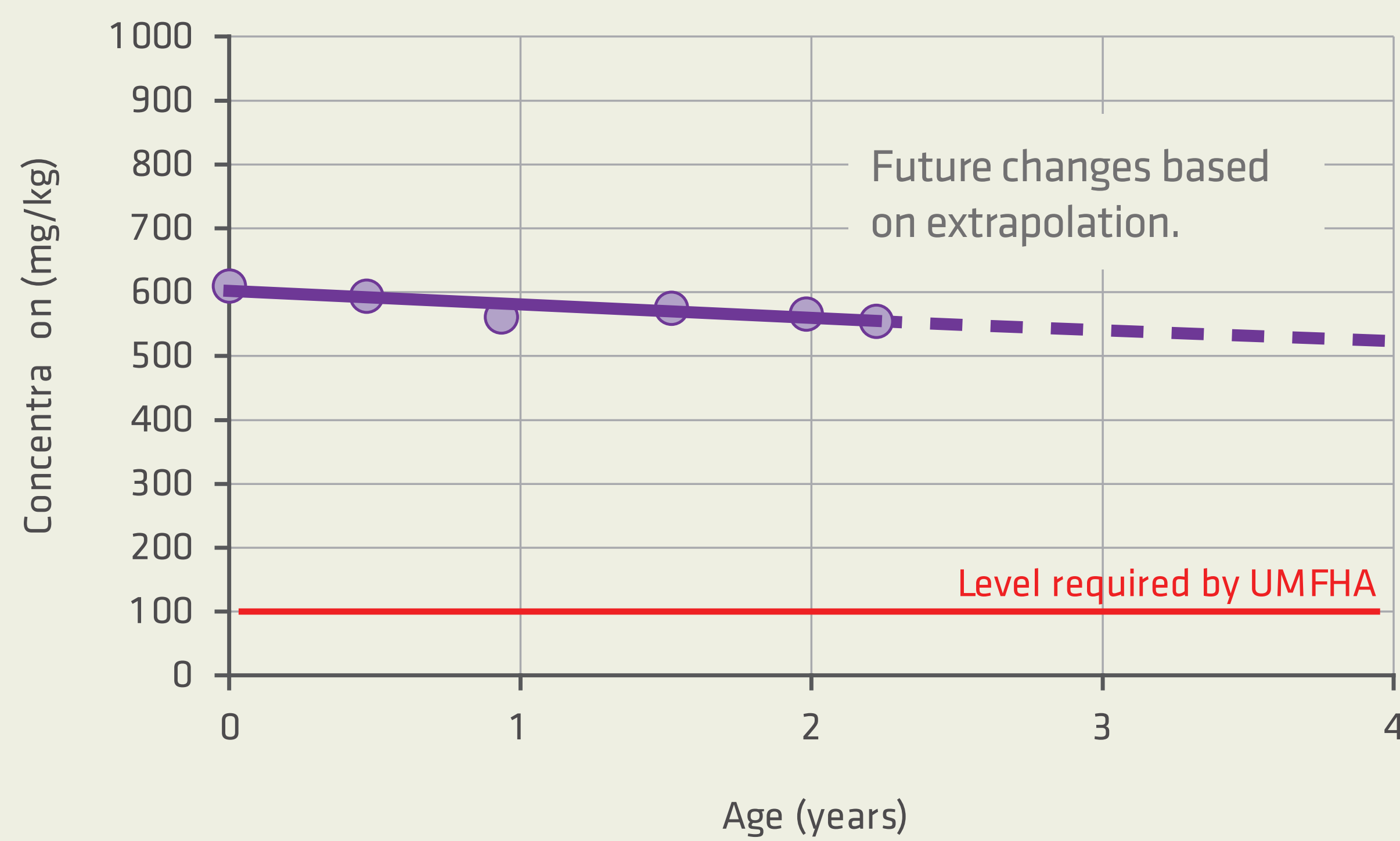
## DHA WENT DOWN & MG WENT UP

The fresh honey had 2700 mg/kg of DHA and 300 mg/kg of MG. Over time, DHA concentration reduced in the honey and MG increased.



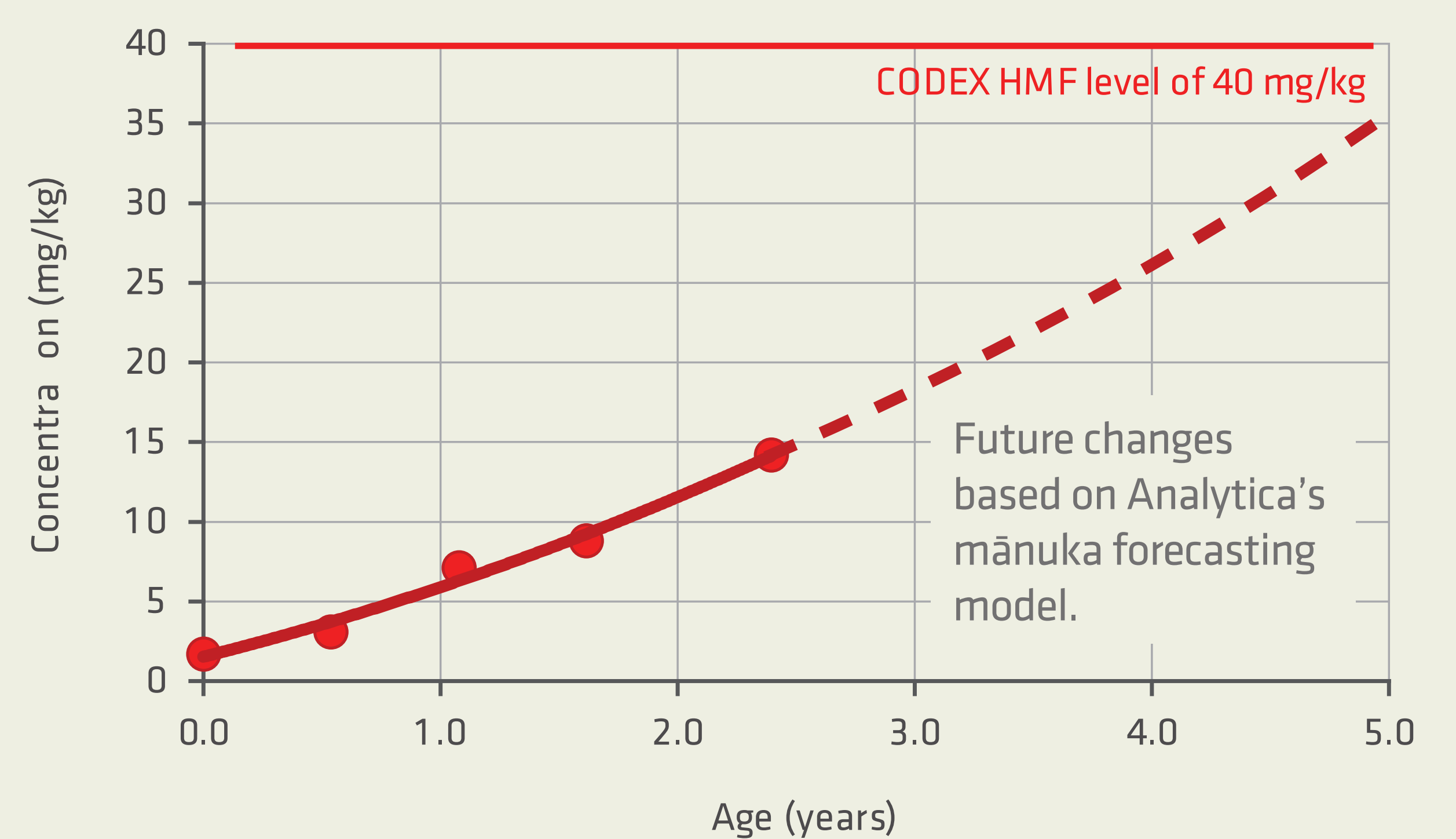
## LEPTOSPERIN WENT DOWN SLOWLY

Leptosperin concentration started at 600 mg/kg, and reduced slowly at a rate of about 4% per year.



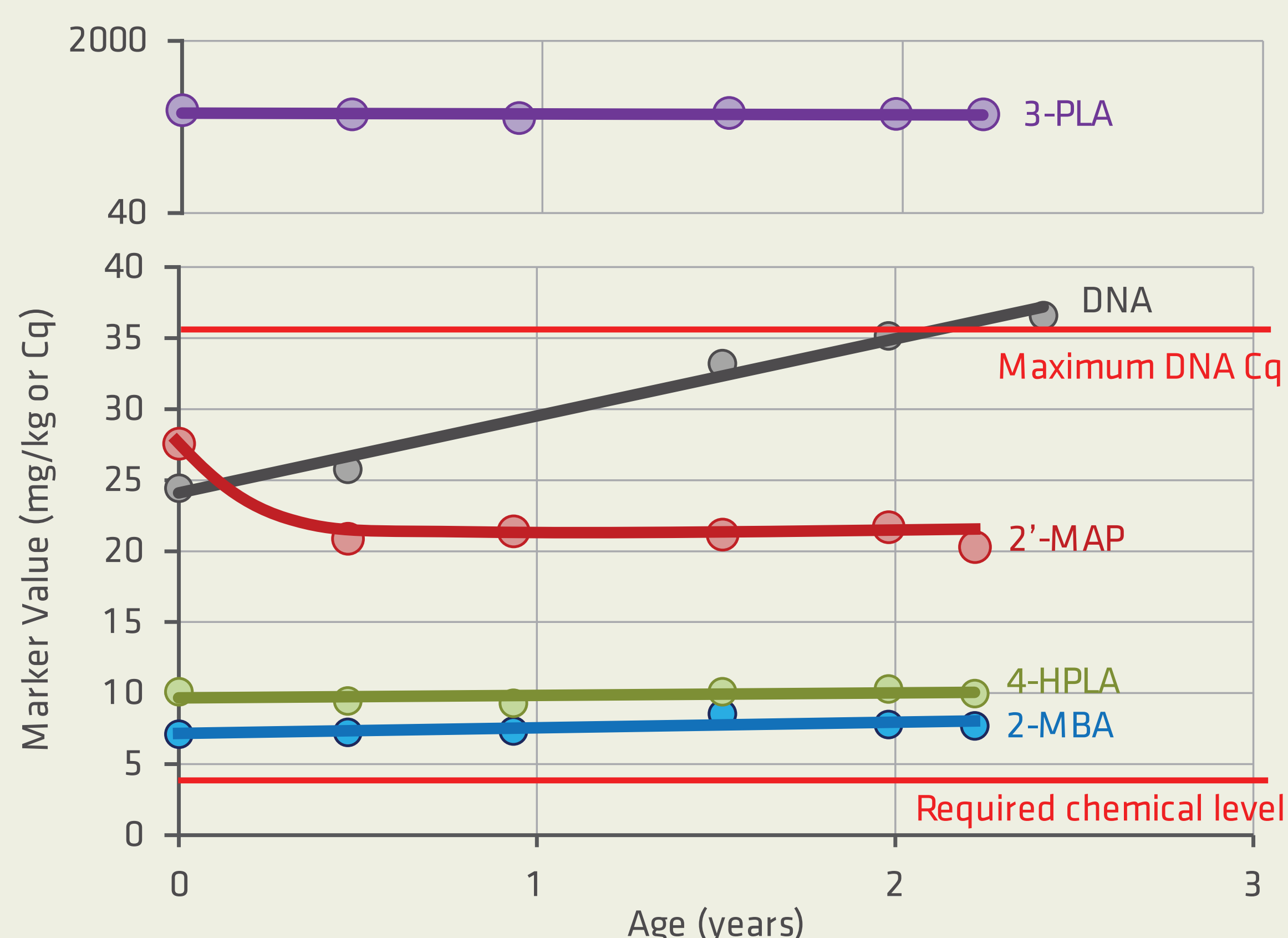
## HMF STEADILY INCREASED

HMF concentration started at 2 mg/kg, and increased steadily over time. It is projected to reach 40 mg/kg after about 5 years at 21°C.



## MPI'S FIVE ATTRIBUTES VARIED

Chemical markers were generally stable, other than 2'-MAP which initially reduced and then stabilised. DNA test results were initially strong, but decreased over time and were not-detected after 2½ Yrs.



## SUMMARY OF MPI MĀNUKA CLASSIFICATION

Honey is most likely to classify as a mono-floral mānuka when it has an MG concentration between 150 and 600 mg/kg, based on Analytica's database of testing since April 2017.

