

## Introduction

There are approx. 160 HMO.

They provide infants with: better gut and immune system.

Vibrational spectroscopy + data modelling → concentration of solutions.

Which method is the best?

Data modelling: what is that?

## Methods

NIR 12500-4000 $\text{cm}^{-1}$   
FTIR 4000-400 $\text{cm}^{-1}$   
Raman - same range as FTIR. Difference:

FTIR: Spectra is made by absorption of light by the vibrating molecules.

Raman: Spectra is made by scattering of light made by the vibrating molecules.

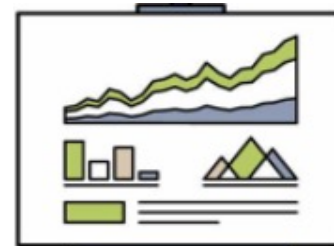


## Outcome

Some methods are better than others

Some instruments make it more difficult to measure the concentrations:  
Overlapping of peaks, difficult to measure (takes a long time), not possible to install within a machine

Confidentiality



## Perspectives

The best suitable methods to measure the concentration of the 5 HMOs is now known

It can be applied to directly measure the concentration of the sugars during fermentation