

DETERMINATION OF GALACTOSYLLACTOSES IN GALACTOOLIGOSACCHARIDE MIXTURES

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The galactosyllactoses 3'-galactosyllactose (3'GL), 4'-galactosyllactose (4'GL) and 6'-galactosyllactose (6'GL) have all been identified as components of human milk and bovine milk [1]. They are also typically components of galactooligosaccharide (GOS) ingredients [2]. As interest in human milk oligosaccharides continues to increase there is also interest in knowing how much of these galactosyllactoses are present in GOS ingredients and the products to which they are added.

We have applied different methods for the analysis of 3'GL, 4'GL and 6'GL in GOS ingredients using liquid chromatography coupled to fluorescence detection and to mass spectrometric detection. The biggest challenge for this analysis is large number of isobaric components that are present in GOS ingredients. In order to assess if the chromatographic separation was sufficient for accurate quantification it was necessary to use ion mobility separation as well as mass spectrometry.

References:

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2. S.S. van Leeuwen, B.J.H. Kuipers, L.Dijkhuizen and J.P.Kamerling *Carbohydrate Research* **2016**, 425, 48-58.