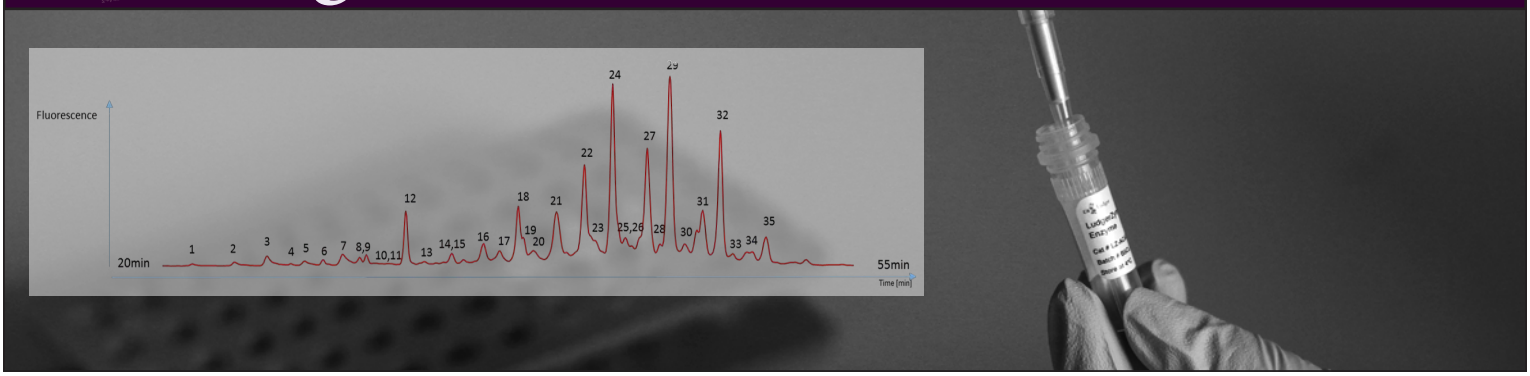
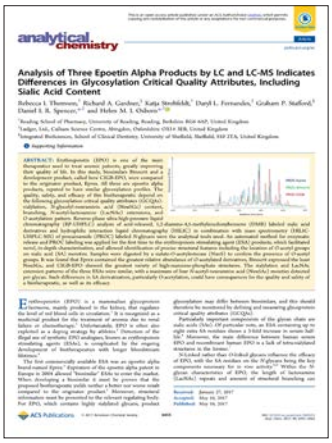
Ludger News

July/August 2017



Characterisation of glycosylation in EPO: paper accepted by Analytical Chemistry


analytical chemistry

Analysis of Three Epoetin Alpha Products by LC and LC-MS Indicates Differences in Glycosylation Critical Quality Attributes, Including Sialic Acid Content

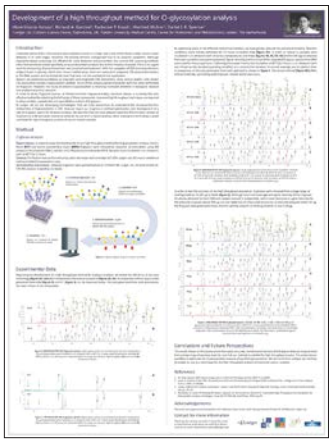
We are delighted to report that a paper entitled "Analysis of three epoetin alpha products by LC and LC-MS indicates differences in glycosylation critical quality attributes, including sialic acid content" has been accepted for publication by Analytical Chemistry. This work was the result of a collaboration between the University of Reading, University of Sheffield and Ludger.

Author(s): Thomson, Rebecca; Gardner, Richard; Strohfeldt, Katja; Fernandes, Daryl ; Stafford, Graham; Spencer, Daniel; Osborn, Helen.
Reference: Anal Chem. 2017 Jun 9. doi: 10.1021/acs.analchem.7b00353. [Epub ahead of print] PMID: 28509534

As part of this work, we used **acetyl esterase** (sialate-O-acetylesterase) to remove 9-, 8- and 7-O-acetyl groups from the EPO biopharmaceutical glycans as these sugars and their acetylation are believed to be essential factors for the function, efficacy and half-life of the drug in patients. This enzyme can also be used for the characterisation of other highly sialylated biotherapeutics such as FSH and blood clotting factors.

Acetyl esterase (sialate-O-acetylesterase) is available to order from Ludger:
Kit containing enzyme and buffer sufficient for 50 samples: Cat # LZ-ACASE-KIT

Reference: Biochem J. 2015 Dec 1;472(2):157-67. doi: 10.1042/BJ20150388. Epub 2015 Sep 16.


Development of a high throughput method for O-glycosylation analysis

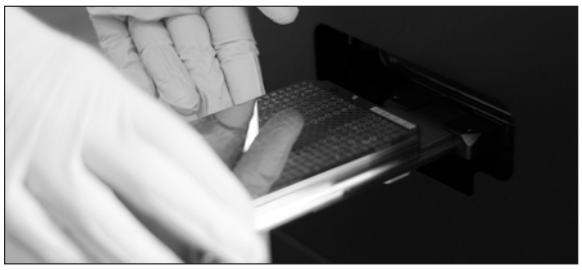
12th Jenner Glycobiology and Medicine Symposium, May 6-9 Dubrovnik, Croatia

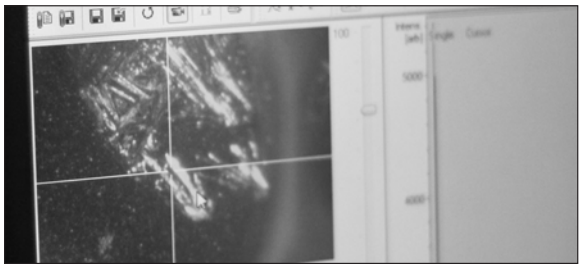
The main focus of this meeting was 'Translational Glycobiology- from bench to bedside', and it featured talks from both glycobiologists and clinicians.

Maximilianos Kotsias presented a poster entitled "Development of a High Throughput Method for O-Glycosylation Analysis". This is a high throughput method using beta elimination and permethylation followed by MALDI-MS. As part of the GlyCoCan Grant, Max is applying this technique to the study of colorectal cancer which is enabling him to understand more deeply the role of O-glycosylation in disease progression.

To view this and other posters we have completed, visit:
www.ludger.com/research-and-development/posters.php

MALDI Analysis Service





Ludger now offers a MALDI Analysis service to determine the m/z values of your sugar samples.

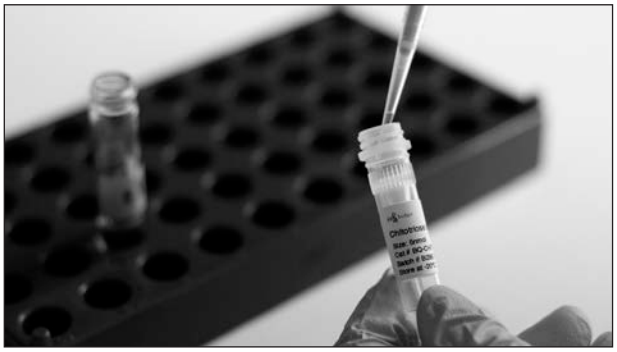
To perform this service we require your samples and the following information:

- Matrix required e.g: 20% DHB, MeCN:0.1%TFA; 50% DHB, MeCN:0.1%TFA; 20mM Sodium Acetate.
- Ionisation mode (positive or negative ion mode).
- Mass range required and the theoretical mass of the target molecule.

Contact us for a quotation: info@ludger.com

Labelled BioQuant chitotriose standards for glycan analysis

Ludger's 2AA- or 2AB- labelled BioQuant chitotriose standards can be used as external quantitative standards when you are analysing your glycan samples by HPLC. Usually when comparing different compounds in an HPLC analysis you would expect their relative response factors (i.e. peak intensities/compound concentration) to differ. However this is not the case for labelled BioQuant chitotriose standards; the peak intensity is related to the fluorescent label (2AA- or 2AB-) so the response factor of 2AB labelled Chitotriose is the same as the response factor of any glycan with GlcNAc at the free/reducing end.



How to use:

- Dissolve the labelled BQ chitotriose standard in a known volume (typically 100µL of 80% acetonitrile for our HILIC column runs)
- Prepare your labelled sample in a known volume
- Inject these solutions on the HPLC
- Determine quantity in your sample by comparing with the peak area of the labelled chitotriose sample

Product information:
BioQuant chitotriose standard, 2AA labelled - 100 pmol Cat # BQ-CAA-CHI-01
BioQuant chitotriose standard, 2AB labelled - 100 pmol Cat # BQ-CAB-CHI-01

For more information visit www.ludger.com/glycan-quantitation/