

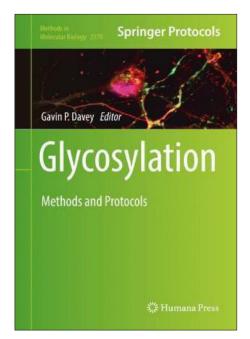
## **Christmas Orders and Delivery Information**

Our offices will be closed between **December 24**<sup>th</sup> and **January 3**<sup>rd</sup>.

Orders received before **December 16**<sup>th</sup> will be processed and delivered before Christmas. First orders to go out in 2022 will be on **January 5**<sup>th</sup> **2022**.



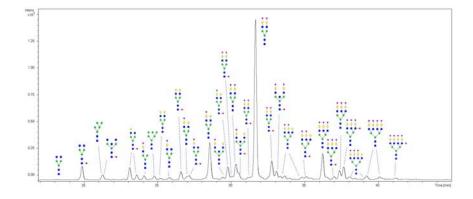
### **Book Chapter Published in Glycosylation: Methods and Protocols**



#### In Press 13 Oct 2021

Ludger has successfully published a book chapter titled 'N-glycan characterization by liquid chromatography coupled with fluorometry and mass spectrometry' in Glycosylation Methods and Protocols. The chapter illustrates the analytical method used to process and analyse N-glycans from plasma samples and is co-authored by Dr Richard Gardner, Ms Paulina Urbanowicz and Dr Daniel Spencer.

Many glycosylated proteins are present in human blood plasma and serum. These glycans are biomarkers that can be used to monitor the health status of patients and detect diseases at early stages. For this reason, there is increasing interest in the scientific community to develop robust and reproducible analytical methods that allow the identification of potential glycan biomarkers and glycan features linked to diseases. In this chapter, the Ludger team describes an analytical method for the **UHPLC** separation of plasma N-glycans which utilises procainamide labelling for fluorescent analysis to determine relative glycan abundance, and online mass spectrometry for glycan identification (See Figure 1). Furthermore, the chapter elaborates on the use of exoglycosidase digestion employed as an example technique to aid and enable structure identification.



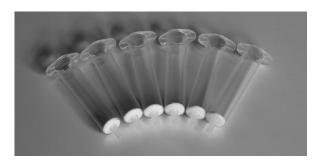
**Figure 1.** Typical fluorescence chromatogram trace of procainamide labelled blood plasma N-glycans separated on a BEH glycan column (15cm x 2.1mm). Main structures are annotated.

Visit our **Procainamide webpage** for more information on how to characterise glycans using **LC-MS**. To find out how to utilise enzymes in **glycan characterisation** visit our **Exoglycosidase enzyme page**. For enquiries or more information, please contact: **info@ludger.com** 

### **Ludger Glyco-Tools: Post-labeling Purification Cartridges**

LudgerClean S are our customers' favourite post-labelling clean-up cartridges due to their practicality and versatility.

The glycan-binding membrane in these cartridges allows the consistent recovery of N- & O- glycans from complex mixtures. While glycans in solutions with a high level of certain organic solvents are retained, most hydrophobic contaminants either simply pass through the cartridges or bind very lightly and can be washed off the membrane. Therefore, glycans can simply be eluted from the membrane with water.

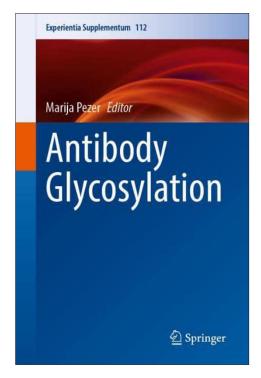


Our S Cartridges are used for cutting-edge medical research at top organisations around the world. Their technology is supported by our 23 years of experience in glycomics and a group of expert scientists whose advice is always available to our customers. We are sure S Cartridges will enhance your glycan analysis projects and recommend following our workflow:



Visit our website to know more about glycan preparation, labelling and analysis. Our team of experts have prepared a long list of materials that will guide you through the process. If you require additional information or support, please contact us at info@ ludger.com

# Book Chapter Published in Antibody Glycosylation Titled 'Automation of Immunoglobulin **Glycosylation Analysis'**



#### In Press 23 Oct 2021

The development of reliable, affordable, high-resolution glycomics technologies that can be used for many samples in a high-throughput manner are essential for both the optimization of glycosylation in the biopharmaceutical industry as well as for the advancement of clinical diagnostics based on glycosylation biomarkers.

Since 2013 when Ludger received European Union funding (Seventh Framework Programme HighGlycan project, grant number 278535) for high-throughput analysis of N-glycans, Ludger has been a world leader in developing and implementing automated high-throughput processing and analytical methods for the analysis of N-glycans from a wide variety of glycoprotein samples including Ig antibodies.

Our in-house experts, Dr Jenifer Hendel, Dr Richard Gardner and Dr Daniel Spencer have co-authored this book chapter published by Springer. Their chapter reviews the sample preparation processes used on liquid-handling robots to obtain high-quality glycomics data for both biopharmaceutical and clinical antibody samples. Their review covers the following four topics about automated glycosylation analysis:

- 1. Glycoprotein purification.
- 2. Glycan or glycopeptide generation, derivatisation, and enrichment.
- Review of the status of the field: benefits and challenges.
- 4. A perspective on what the future holds for the automation of glycomics.

We are sure this book chapter will bring valuable knowledge to your organisation if you are dealing with large sample sets and are interested in automation. We also recommend you have a look at other chapters of this book which contain detailed information on biosynthesis, function, and application of antibody glycosylation.

At Ludger, several glycan analysis workflows have been automated using a liquid handling robot for high throughput sample processing and analysed using orthogonal platforms. For enquiries or more information on how we can assist you with high throughput glycan analysis workflows, please contact: info@ludger.com

Join our Glycotechnology News Service





