Ludger News

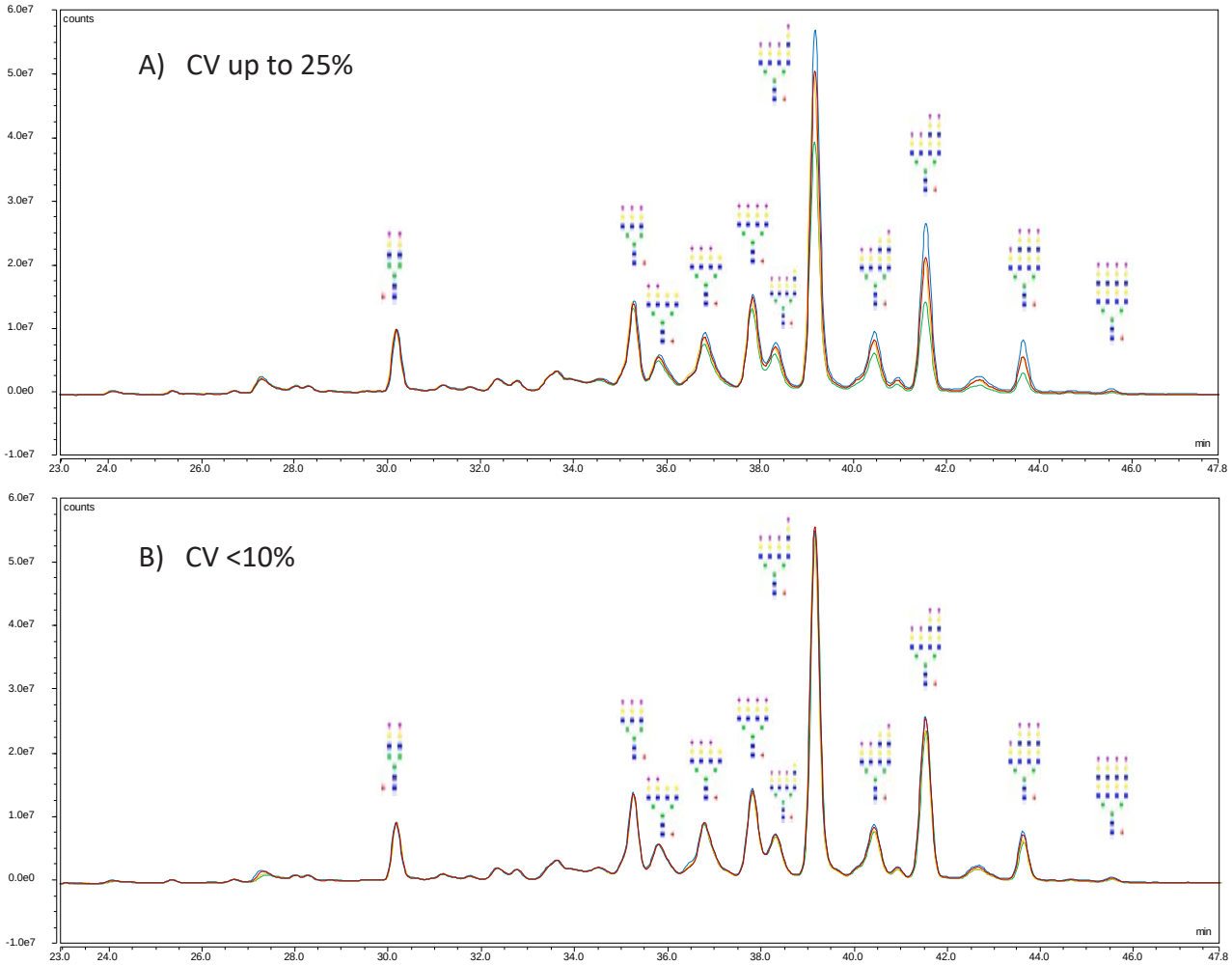
July/August 2018

Ludger Procainamide Clean-up

We hope you enjoy reading our newsletters!
If you haven't already, please sign up to receive regular updates regarding technology.
You can do this via our website, www.ludger.com

Why is it important to clean up labelled samples?

We recommend that you perform post labelling sample clean-up to remove non-glycan material, such as excess dye, salts and other labelling reagents, prior to analysis by HPLC, MALDI-MS or LC-MS. The large excess of reagents and contaminants can interfere with fluorescent detection, chromatographic separation and reduce the lifetime of a column, and thereby impair method robustness. Excess of reagents can also impact and complicate MALDI-MS and LC-MS analyses.



*The examples above show BEH HILIC UHPLC profiles of N-glycans released from erythropoietin (EPO) glycoprotein. Glycans were labelled with procainamide (using LT-KPROC-24). Chromatogram **A** shows overlaid profiles of four sample replicates where samples were not cleaned-up before the analysis. Remaining free dye was shown to interfere with the separation resulting in non-reproducible results (coefficient of variation up to 25% on the main peaks). In chromatogram **B**, the same samples were cleaned-up after labelling with HILIC SPE (using LC-PROC-96) and this improved the reproducibility by reducing the inter-sample variability.*

Ludger offers a range of products optimised for clean-up of glycans labelled with 2-AA, 2-AB, procainamide and APTS, as well as clean-up methods designed specifically for LC and MS applications. For more information on our clean-up technology visit our Glycan Clean Up page, and don't hesitate to contact us with any queries: info@ludger.com

Native (unlabelled) and labelled glycan standards

Ludger provides a range of purified glycan standards which can be used for different applications during biopharmaceutical development, including the analysis of sialic acids, monosaccharides, N-glycans and O-glycans.

As well as offering purified **unlabelled** glycan standards we also provide glycans and an **N-glycan library** labelled with **2AB** and **2AA**, **APTS** or **Procainamide**.

Visit our System Suitability Standards webpage to view their specific uses and a summary table outlining our products and application options.

Coming soon: V-Tag glycan release and labelling kit

We are excited to announce the forthcoming launch of our V-Tag glycan kit which enables release of glycans from glycoproteins, labelling and clean up within 5 hours. The glycans can then be analysed by (U)HPLC. Each kit contains PNGase F, V-Tag dye, reagents and SPE cartridges, sufficient for up to 30 samples.
Cat# LT-VTAG-C30

More information will be available soon on our website, www.ludger.com
If you would like to receive regular updates on this and other products, please sign up to our News service on our homepage.

New Publication in Glycoconjugate Journal on Automated glycomic profiling

A successful Business Interaction Voucher funded by IB Carb (www.ibcarb.com) was used to strengthen the glycomics collaboration between Imperial College London and Ludger Ltd. This has resulted in publishing the following article titled "**Towards automation of glycomic profiling of complex biological materials**" by Shubhakar et al. in the Glycoconjugate journal.

This paper compares the performance of an automated plate based method for N-glycan release and permethylation of glycans derived from mouse lung and kidney tissues to established standard glycomic protocols using matrix-assisted laser desorption/ionization time-of-flight mass spectrometry (MALDI-TOF MS). The study revealed that the automated workflow is highly repeatable and it shows highly comparable MALDI-TOF-MS N- and O-glycan profiles of complex heterogeneous glycoproteins when compared with the standard protocol.

The key advantages of using the automated sample processing steps include reduced sample preparation times, low sample volumes needed for processing, it eliminates the need for performing the labour intensive steps, minimises hands-on-time, increases sample throughput and this set up has also shown immense potential for multiplexing, making the automated samples processing method convenient, scalable, fast and reproducible.

Ludger's LT-PERMET-96 kit was used for derivatising these complex biological samples. For more information on the LudgerTag Permethylation kits and to view the presentation on our technology, please visit our Permethylation webpage.

Pubmed link: Glycoconj J. 2018 Jun 16. doi: 10.1007/s10719-018-9825-8