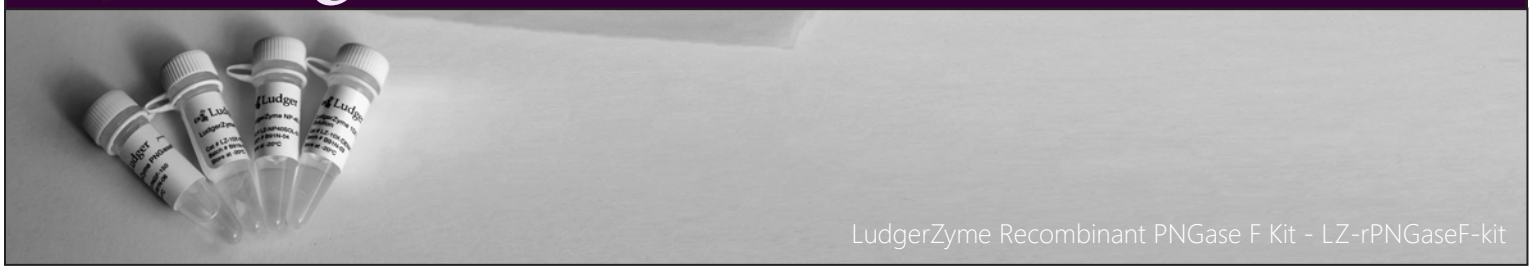
# Ludger News

November/December 2019




## Christmas Orders and Delivery Information

Our offices will be closed between December 24th and January 2nd.
Orders received before December 12th will be processed and delivered before Christmas.
First orders to go out in 2020 will be on January 3rd 2020.

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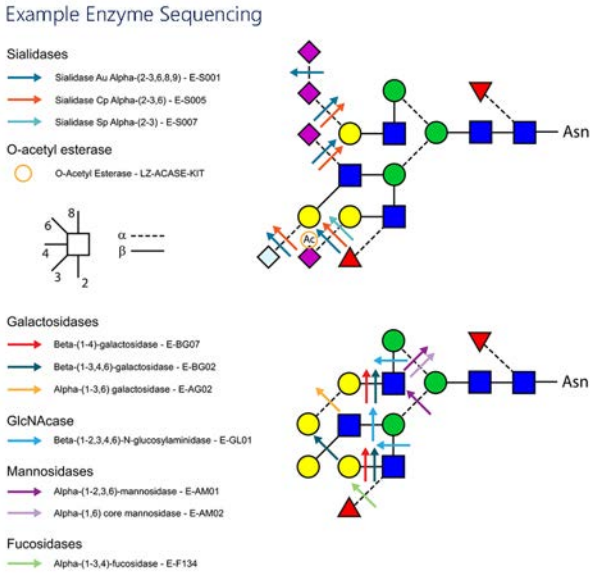
## Announcing the launch of the new webpages for Ludger enzymes

We are very excited at Ludger to launch our newly designed Endoglycosidase and Exoglycosidase enzyme webpages with immediate effect. Glycosidases are essential enzymatic tools in glycan analysis workflows for glycan release and characterisation. Our featured products include:

- PNGase F and range of other endo-acting enzymes for release of N-linked glycans from glycoproteins
- O-glycanase for enzymatic release of O-linked glycans
- Ceramide glycanase for deglycosylation of glycosphingolipids
- Panel of exoglycosidases (including O-acetyl esterase, range of sialidases, galactosidases, fucosidase and mannosidases) that can be used in sequential digestions of glycans and glycoproteins and as tools for glycan structure elucidation




The new webpages have been designed with an intuitive layout for ease of navigation and the menu options are designed to guide you to the most appropriate enzyme of your choice for your glycan analysis workflows.

We have incorporated valuable information regarding each enzyme including product specifications, glycan cartoon depicting the enzyme activity, source of enzyme, enzyme specificity, storage, stability as well as images of enzyme kits and/or kit contents. Each enzyme page also has links to their associated product guides, certificates of analysis, specification sheets and safety data sheets along with companion products that are listed on the side bar to assist you with glycan profiling and characterisation.

For more information, regarding our new enzyme webpages please visit our Endoglycosidase and Exoglycosidase pages. If you have any questions or to request a quotation, please contact us at info@ludger.com.

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## Ludger at Well Characterized Biologics (WCB) 2019

Dr Radoslaw Kozak (Head of Glycan Analysis Services) will be attending the Well Characterized Biologics meeting (WCB) on November 11-13th 2019 in Reston (VA), USA. Rad will be presenting a poster ("Analysis of Glycosylation Critical Quality Attributes (GCQAs) of monoclonal antibody (mAb) therapeutics") and hosting a roundtable discussion titled "Glycosylation Critical Quality Attributes (GCQAs) for Biopharmaceuticals".

**Well Characterized Biologics & Biological Assays**

Please let us know if you will also be attending and would like to meet during this conference.
If you would be interested in viewing this poster, please sign-up to our Glycotechnology News service to be notified when it becomes available. For more information on the WCB 2019, visit: https://lifesciences.knect365.com/well-characterized-biologicals/.

Rad will be also visiting our clients and partners in the New York Metropolitan Area, Wed & Thurs (13-14th November 2019) so if you would like him to stop by for a discussion that could be arranged.

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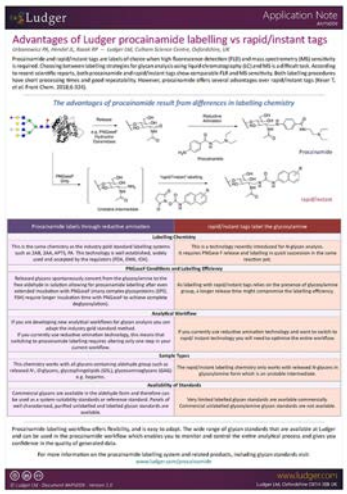
## Advantages of Ludger's Procainamide labelling technology versus rapid/instant tags




Choosing between labelling strategies for glycan analysis using liquid chromatography with fluorescence detection (LC-FLR) and mass spectrometry (MS) is a difficult task. Even though 2-aminobenzamide (2-AB) labelling has been a gold standard method for glycan profiling and characterisation using LC-FLR as an analytical platform, new contenders such as procainamide and rapid/instant tags have been in use recently due to their comparable fluorescence, increased MS sensitivity and short processing times (Keser T, et al. Front Chem. 2018;6:324).

However, it should be noted that procainamide labelling offers several advantages over rapid/instant tags. Our new application note outlines the features, benefits and advantages of Ludger's Procainamide labelling technology in comparison to gold standard labelling (2-AB) as well as other rapid/instant tags.

To view the application note and to learn more about Ludger's Procainamide labelling technology please visit our webpage on procainamide labelling. We offer procainamide labelling kits for labelling 24 samples (Cat #: LT-KPROC-24 and LT-KPROC-VP24) and 96 sample labelling kit (Cat #: LT-KPROC-96) formats. To enquire or place an order please contact info@ludger.com

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## Publication in Microbiology: Bacterial sialidase as a virulence factor in oral pathogen infections

A successful collaboration between Ludger and School of Clinical Dentistry, University of Sheffield resulted in publishing an article in Microbiology titled "Characterization of Porphyromonas gingivalis sialidase and disruption of its role in host-pathogen interactions".

As part of this research, we performed detailed characterization of the activity profile of the sialidase isolated from oral bacteria P. gingivalis, which was made possible by LC-MS analysis of procainamide labelled substrates and products. This study has contributed to our understanding of the multifarious roles of bacterial sialidases in virulence by oral pathogens. Moreover, it indicated how sialidase inhibition with chemotherapeutics could be a promising strategy for periodontitis therapy.

Please visit our Procainamide webpage for more information on how to characterise glycans using LC-MS. And for more information about this article visit our Publications webpage.

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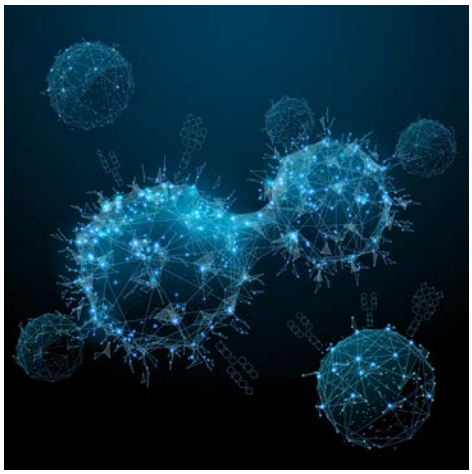

## Publication in PLOS One: Glycoanalytical technologies for cell line analysis

A successful collaboration by groups at Ludger, Amsterdam UMC and Leiden University Medical Centre, as part of the GlyCoCan grant, resulted in publishing an article in PLOS One titled "Method comparison for N-glycan profiling: Towards the standardization of glycoanalytical technologies for cell line analysis".

Studies into glycosylation changes in cancer have been performed on a variety of sample substrates. In contrast to the limited availability of tumour tissue and primary cells, the availability of in vitro models makes cell lines a suitable, and useful tool for studying biological mechanisms in disease.

With a number of techniques currently available for the analysis of protein N-glycosylation, this research provides an overview of the methodologies routinely employed for the release of N-glycans from in vitro established cell lines, highlighting the information that can be obtained from each and when they might be best used. Based on our most recent results indicating fast processing times, high sensitivity and repeatability, we demonstrate that the in-solution PNGaseF method, followed by procainamide labelling and UHPLC and ESI-MS, produces robust results, exhibits high throughput potential, and can be used as a standard approach for N-glycosylation analysis of in vitro established cell lines.

Please visit our Enzyme webpage for more information on how to release glycans from cell lines, and for more information about this article visit our Publications webpage.

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