March/April 2020

Ludger News

LC-EC50

LudgerClean desalting cartridges - LC-EC50

Glycan Analysis Services

Ludger offers custom analytical services to suit your individual requirements. We have many years of expertise with analysing glycosylation (including N- and O- glycosylation) from variety of sample types including:

- Biopharmaceuticals: mAbs, glycoprotein hormones (e.g. follicle stimulating hormone (FSH) and erythropoietin (EPO), Fc fusion proteins, vaccines. We can help you to answer questions about the structures of glycans at all stages of your drug's lifecycle – from QbD studies to regulatory submissions, comparability studies, production scale up, and QC for lot release.
- Cells: mammalian cell lines, bacterial cell components
- Biological fluids, tissues and others

For more detail on the different type of analysis we offer, please visit our Glycan Analysis webpages

Here are some of the services that we provide for you:

(i) UHPLC, MALDI, LC-MS glycan profiling and exoglycosidase sequencing.

We tailor these analyses to your specific requirements. These include: monosaccharide analysis; sialic acid analysis; HILIC-LC, HILIC-LC-MS/MS, MALDI, WAX-LC and exoglycosidase sequencing of released glycans; as well as site specific analysis. We provide a detailed glycoprofiling report of profiles and structures.

(ii) High throughput N-glycan screening.

This service provides parallel analysis of hundreds of samples at an affordable cost. You can select the analytical platform that you would like us to use giving you information on glycan relative quantitation and identification. Results are typically within two weeks of starting sample analysis.

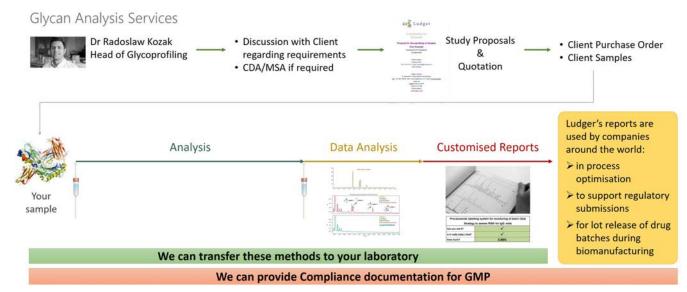
(iii) Method validation.

We can validate specific methods as required.

(iv) Method transfer.

We help you to get glycoprofiling methods up and running in your laboratories. We offer everything from advice on which kits to use up to a fully validated method transfer, whichever fits your specific requirements.

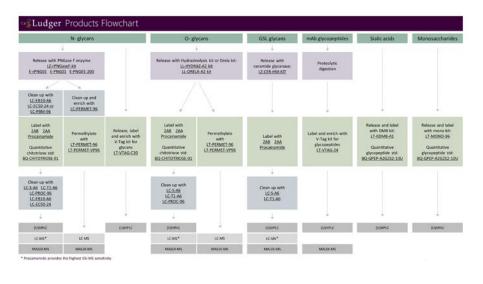
How it works:



For more information visit www.ludger.com/glycan-analysis-services, or contact Dr Radoslaw Kozak: rad.kozak@ludger.com



Ludger Products in a Workflow



High quality analytical glycan profiling and characterisation has continued to present many challenges. Ludger, the leader in analytical technology for medical applications of glycobiology provides products for glycan monitoring and characterization.

Our **Products Flowchart** illustrates how Ludger products can be used in succession to release, clean up and derivatize glycans (and glycopeptides) from your glycoprotein samples ready for analysis.

Please visit our Products webpage to view this and other helpful presentations and resources.

LudgerClean desalting cartridges: LC-EC50-24

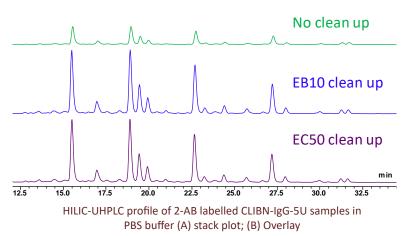
Clean up of glycans is an essential step in sample preparation, as it removes excess, <u>salts</u> and <u>detergents</u> which could interfere with glycan labelling or mass spectrometry analysis. We have introduced an alternative product to our LC-EB10-A6 cartridges, called LC-EC50-24. We have tested these new cartridges for clean up of N-glycan samples before labeling and our data shows that these work as efficiently as our LC-EB10 cartridges.

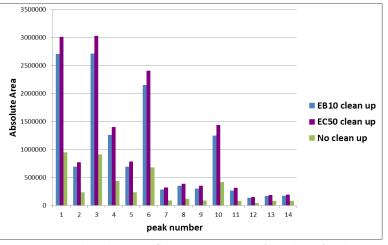
The data below compares HILIC-UHPLC chromatograms for 2-AB labelled IgG N-glycans standards (Cat# CLIBN-IgG-5U) in PBS buffer when they are labelled without a previous cleaned up and after clean up with LudgerClean EB10 or EC50 cartridges.

Ludger's glycan purification cartridges (Cat# LC-EC50-24) have been designed to purify glycans from non-carbohydrate material including salts, proteins and detergents by electronic interaction of the glycans with the surface of the cartridge.

Clean-up of glycans can be performed using EC-50 cartridges:

- after enzymatic or chemical release of glycans from glycoproteins
- after exoglycosidases (enzymatic) digestion of glycans to release individual monosaccharides to confirm glycan identity and structure
- before and after glycan labelling using fluorescent tags such as 2-aminobenzamide acid (2-AB) or 2-aminobenzoic acid (2-AA)





Average absolute area of the CLIBN-IgG peaks (8 replicates) with EB10 clean up (blue), EC50 clean up (purple) and with NO clean up (green) followed by 2-AB labelling/T1 clean up

These cartridges come in packs of 24.

For more information visit our EC50 feature webpage and for a quotation, contact: info@ludger.com

