

Glycopeptide Enrichment & Sample Prep — Hands-on

Develop practical, bench ready skills for glycopeptide focused sample preparation. This module walks through proteolysis design, enrichment chemistries (HILIC, lectin, TiO2/SAX), cleanup and quality control so that downstream LC MS/MS glycoproteomics delivers confident site specific glycan information.

Glycopeptide Enrichment & Sample Prep

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Session 1

Fee: Rs 8800 [Apply Now](#)

Samples, Proteolysis & Glycoprotein Strategy

Sample types for glycopeptide analysis

[purified antibodies and biologics](#) [serum / plasma / CSF](#) [cell and tissue lysates](#)

Proteolysis design for glycopeptides

[trypsin vs alternative proteases](#) [sequence coverage vs glyco site resolution](#) [enzyme to substrate ratios and incubation](#)

Detergent removal and peptide ready extracts

SDS removal strategies **FASP / S-Trap concepts**
preventing glycan loss in prep

Session 2

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Glycopeptide Enrichment Chemistries

HILIC based enrichment for glycopeptides

resin choices and binding conditions **organic content**
and salt effects **elution strategies and recovery**

Lectin based enrichment strategies

lectin panels for motif targeting **binding buffers and**
specificity **competitive sugar elution concepts**

Enrichment of sialylated and phosphopeptide like species

TiO₂ / metal oxide overview **SAX / SCX based**
approaches **combining methods in workflows**

Session 3

Fee: Rs 14800 Apply Now

Cleanup, Fractionation & QC Metrics

Desalting and detergent free glycopeptide pools

C18 tips and cartridges **avoiding glycan loss in**
cleanup **elution solvent choices**

Fractionation options for complex samples

off line reversed phase fractions **basic vs acidic**
fractionation **balancing depth vs run time**

QC metrics for enrichment success

% glycopeptide vs non glycopeptide **recovery and**
reproducibility checks **spike in and standard usage**

Session 4

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Mini Capstone: Enrichment Workflow Design

Design a full glycopeptide enrichment workflow

from starting sample to LC MS ready fraction

Match enrichment strategy to biological question

site occupancy vs motif discovery **sialylation vs core**
fucosylation focus **limited material vs high**
throughput

Deliverables and documentation

workflow schematic **step wise SOP style protocol** **QC**
checklist and acceptance criteria