

INDUSTRIAL BIOTECHNOLOGY • ENZYME MANUFACTURING SKILL DEVELOPMENT



NTHRYS
OPC PVT LTD



Industrial Enzymes Manufacturing Training Programs

A complete industrial catalogue of hands-on enzyme production training modules — from detergent proteases to pharmaceutical biocatalysts.

59

PROGRAMS

10

CATEGORIES

2026

EDITION

Program Categories at a Glance

This catalogue lists every industrial enzyme our training programs are equipped to manufacture and teach, organised into 10 technology streams. Each program carries a unique product code for easy reference, enrolment and certification.

STREAM	CATEGORY FOCUS	DESCRIPTION	COUNT
NIE-DT	Detergent & Cleaning Enzymes	Protease, lipase & amylase detergent production	6
NIE-ST	Starch & Sugar Processing Enzymes	Amylase, glucoamylase & isomerase production	6
NIE-BK	Baking & Cereal Enzymes	Dough-conditioning & cereal enzyme production	6
NIE-BV	Brewing, Beverage & Juice Enzymes	Brewing, juice-clarification & debittering enzymes	6
NIE-DY	Dairy & Food-Protein Enzymes	Rennet, lactase & food-protein enzyme production	6
NIE-TL	Textile & Leather Enzymes	Desizing, bio-polishing & leather enzyme production	6
NIE-PP	Paper, Pulp & Technical Enzymes	Bleach-boosting, deinking & pitch-control enzymes	5
NIE-PH	Pharmaceutical & Biocatalysis Enzymes	Acylase, chiral-synthesis & fine-chemical biocatalysts	6
NIE-PR	Production & Fermentation Technology	Submerged, solid-state & recombinant production	6
NIE-FT	Downstream, Formulation & Standardization	Recovery, immobilisation & assay standardisation	6
Total training programs			59

HOW TO READ A CODE

NIE – DT – 01

NIE Nthrys Industrial-Enzyme Program DT Category stream 01 Program number

01

CATEGORY • NIE-DT

Detergent & Cleaning Enzymes

Protease, lipase & amylase detergent production

6

PROGRAMS

CODE	TRAINING PROGRAM	DESCRIPTION
NIE-DT-01	Alkaline Protease	Protein-stain detergent enzyme.
NIE-DT-02	Detergent Lipase	Fat & oil-stain enzyme.
NIE-DT-03	Detergent Amylase	Starch-stain enzyme.
NIE-DT-04	Detergent Cellulase	Fabric-care & anti-pilling enzyme.
NIE-DT-05	Mannanase	Gum & food-stain enzyme.
NIE-DT-06	Dishwash Enzyme Blend	Multi-enzyme cleaning blend.

CODE	TRAINING PROGRAM	DESCRIPTION
NIE-ST-01	Alpha-Amylase (Liquefaction)	Starch-liquefying enzyme.
NIE-ST-02	Glucoamylase	Glucose-yielding saccharifying enzyme.
NIE-ST-03	Pullulanase	Starch-debranching enzyme.
NIE-ST-04	Glucose Isomerase	HFCS-producing enzyme.
NIE-ST-05	CGTase	Cyclodextrin-producing enzyme.
NIE-ST-06	Maltogenic Amylase	Maltose-syrup enzyme.

03

CATEGORY • NIE-BK

Baking & Cereal Enzymes

Dough-conditioning & cereal enzyme production

6

PROGRAMS

CODE	TRAINING PROGRAM	DESCRIPTION
NIE-BK-01	Fungal Amylase	Dough-conditioning amylase.
NIE-BK-02	Baking Xylanase	Dough-handling & volume enzyme.
NIE-BK-03	Glucose Oxidase	Dough-strengthening enzyme.
NIE-BK-04	Baking Lipase	Crumb & shelf-life enzyme.
NIE-BK-05	Baking Protease	Gluten-modifying enzyme.
NIE-BK-06	Transglutaminase	Protein cross-linking enzyme.

04

CATEGORY • NIE-BV

Brewing, Beverage & Juice Enzymes

Brewing, juice-clarification & debittering enzymes

6

PROGRAMS

CODE	TRAINING PROGRAM	DESCRIPTION
NIE-BV-01	Beta-Glucanase	Mash-viscosity brewing enzyme.
NIE-BV-02	Amyloglucosidase	Attenuation brewing enzyme.
NIE-BV-03	Juice Pectinase	Juice-clarification enzyme.
NIE-BV-04	Juice Cellulase / Macerage	Extraction & yield enzyme.
NIE-BV-05	Naringinase	Citrus-debittering enzyme.
NIE-BV-06	ALDC	Diacetyl-control brewing enzyme.

05

CATEGORY • NIE-DY

Dairy & Food-Protein Enzymes

Rennet, lactase & food-protein enzyme production

6

PROGRAMS

CODE	TRAINING PROGRAM	DESCRIPTION
NIE-DY-01	Microbial Rennet (Chymosin)	Milk-coagulating cheese enzyme.
NIE-DY-02	Lactase (β -Galactosidase)	Lactose-hydrolysing enzyme.
NIE-DY-03	Cheese-Flavour Lipase	Flavour-development lipase.
NIE-DY-04	Food Protease	Protein-hydrolysis enzyme.
NIE-DY-05	Catalase	Peroxide-removal enzyme.
NIE-DY-06	Transglutaminase (Food)	Texture-binding enzyme.

06

CATEGORY • NIE-TL

Textile & Leather Enzymes

Desizing, bio-polishing & leather enzyme production

6

PROGRAMS

CODE	TRAINING PROGRAM	DESCRIPTION
NIE-TL-01	Desizing Amylase	Starch-size removal enzyme.
NIE-TL-02	Bio-Polishing Cellulase	Denim & fabric-finishing enzyme.
NIE-TL-03	Bio-Scouring Pectinase	Cotton-scouring enzyme.
NIE-TL-04	Bleach-Cleanup Catalase	Peroxide-removal enzyme.
NIE-TL-05	Leather Bating Protease	Hide-bating & dehairing enzyme.
NIE-TL-06	Leather Degreasing Lipase	Fat-removal leather enzyme.

07

CATEGORY • NIE-PP

Paper, Pulp & Technical Enzymes

Bleach-boosting, deinking & pitch-control enzymes

5

PROGRAMS

CODE	TRAINING PROGRAM	DESCRIPTION
NIE-PP-01	Pulp Xylanase	Bleach-boosting enzyme.
NIE-PP-02	Deinking Cellulase	Recycled-fibre deinking enzyme.
NIE-PP-03	Pitch-Control Lipase	Resin-control enzyme.
NIE-PP-04	Laccase	Lignin-modification enzyme.
NIE-PP-05	Drainage / Modification Amylase	Starch-modifying enzyme.

08

CATEGORY • NIE-PH

Pharmaceutical & Biocatalysis Enzymes

Acylase, chiral-synthesis & fine-chemical biocatalysts

6

PROGRAMS

CODE	TRAINING PROGRAM	DESCRIPTION
NIE-PH-01	Penicillin Acylase	Semi-synthetic antibiotic enzyme.
NIE-PH-02	Chiral-Synthesis Lipase	Stereoselective biocatalyst.
NIE-PH-03	Nitrilase / Nitrile Hydratase	Nitrile-conversion enzyme.
NIE-PH-04	Asparaginase	Acrylamide & pharma enzyme.
NIE-PH-05	Pharma-Grade Protease	Process biocatalyst protease.
NIE-PH-06	Ketoreductase / Transaminase	Fine-chemical biocatalyst.

CODE	TRAINING PROGRAM	DESCRIPTION
NIE-PR-01	Submerged Fermentation Process	Liquid-culture enzyme production.
NIE-PR-02	Solid-State Fermentation Process	SSF enzyme production.
NIE-PR-03	Aspergillus Enzyme Production	Fungal enzyme strain process.
NIE-PR-04	Bacillus Enzyme Production	Bacterial enzyme strain process.
NIE-PR-05	Recombinant Enzyme Production	Engineered-host expression.
NIE-PR-06	Strain Development & Improvement	Mutagenesis & screening.

CODE	TRAINING PROGRAM	DESCRIPTION
NIE-FT-01	Enzyme Recovery & Purification	Clarification & chromatography.
NIE-FT-02	Ultrafiltration & Concentration	Membrane concentration.
NIE-FT-03	Enzyme Granulation	Low-dust granular formulation.
NIE-FT-04	Liquid Stabilised Formulation	Stabilised liquid enzyme product.
NIE-FT-05	Enzyme Immobilisation	Carrier-bound enzyme product.
NIE-FT-06	Activity Assay & Standardisation	Potency testing & QC.

ENROL • FERMENT • CATALYSE

Build a Career in Enzyme Manufacturing

Every program in this catalogue is delivered as hands-on training on working fermentation and bioprocess equipment — covering strain development, submerged & solid-state fermentation, enzyme recovery & purification, immobilisation, formulation, activity assay & standardisation, packaging and quality compliance. Mix and match programs to design a track that fits your goals.

59 training programs

10 technology streams

Unique **product code** for every module

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