

ALGAL BIOTECHNOLOGY • MICROALGAE CULTIVATION SKILL DEVELOPMENT



NTHRYS
OPC PVT LTD



Spirulina & Microalgae Biomass Industrial Manufacturing Training Programs

A complete industrial catalogue of hands-on microalgae cultivation training modules — from spirulina & chlorella to omega-3 & pigment-rich biomass.

55

PROGRAMS

10

CATEGORIES

2026

EDITION

Program Categories at a Glance

This catalogue lists every microalgal biomass and cultivation skill our training programs are equipped to produce 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
NAB-SP	Spirulina (Arthrospira) Biomass	Food & feed-grade spirulina biomass production	6
NAB-CH	Chlorella Biomass	Cracked-wall & heterotrophic chlorella production	5
NAB-PG	High-Value Pigment Microalgae	Haematococcus & Dunaliella pigment biomass	5
NAB-OM	Omega-3 & Marine Microalgae	EPA/DHA & aquaculture-feed microalgae production	6
NAB-IN	Industrial & Specialty Microalgae	Scenedesmus, Botryococcus & diatom biomass	5
NAB-ST	Strain, Inoculum & Media Technology	Strain isolation, scale-up & media formulation	5
NAB-OP	Open-Pond Cultivation Systems	Raceway design, operation & productivity control	5
NAB-PB	Photobioreactor & Closed Systems	Tubular, flat-panel & heterotrophic cultivation	6
NAB-HD	Harvest, Dewatering & Drying	Flocculation, centrifugation & drying processes	6
NAB-QC	Biomass Quality, Safety & Standardisation	Composition, toxin-safety & grade standardisation	6
Total training programs			55

HOW TO READ A CODE

NAB – SP – 01

NAB Nthrys Algae-Biomass Program SP Category stream 01 Program number

01

CATEGORY • NAB-SP

Spirulina (Arthrospira) Biomass

Food & feed-grade spirulina biomass production

6

PROGRAMS

CODE	TRAINING PROGRAM	DESCRIPTION
NAB-SP-01	Spirulina platensis Biomass	Standard food-grade spirulina.
NAB-SP-02	Spirulina maxima Biomass	High-protein spirulina strain.
NAB-SP-03	Food-Grade Spirulina Powder	Dried food-grade biomass.
NAB-SP-04	Feed-Grade Spirulina	Animal / aqua-feed biomass.
NAB-SP-05	Spirulina Tablet / Flake	Pressed biomass product.
NAB-SP-06	Organic / Premium Spirulina	Certified-organic biomass.

02

CATEGORY • NAB-CH

Chlorella Biomass

Cracked-wall & heterotrophic chlorella production

5

PROGRAMS

CODE	TRAINING PROGRAM	DESCRIPTION
NAB-CH-01	Chlorella vulgaris Biomass	Standard chlorella biomass.
NAB-CH-02	Chlorella sorokiniana Biomass	Fast-growing chlorella.
NAB-CH-03	Broken-Cell-Wall Chlorella	Digestible cracked-wall biomass.
NAB-CH-04	Heterotrophic Chlorella	Fermenter-grown chlorella.
NAB-CH-05	Chlorella Tablet / Powder	Finished chlorella product.

03

CATEGORY • NAB-PG

High-Value Pigment Microalgae

Haematococcus & Dunaliella pigment biomass

5

PROGRAMS

CODE	TRAINING PROGRAM	DESCRIPTION
NAB-PG-01	Haematococcus pluvialis Biomass	Astaxanthin-rich biomass.
NAB-PG-02	Dunaliella salina Biomass	Beta-carotene halophile biomass.
NAB-PG-03	Astaxanthin Cyst Biomass	Encysted red-stage biomass.
NAB-PG-04	Phycocyanin-Rich Spirulina	Blue-pigment biomass.
NAB-PG-05	Pigment Biomass Stabilisation	Oxidation-protected biomass.

CODE	TRAINING PROGRAM	DESCRIPTION
NAB-OM-01	Nannochloropsis Biomass	EPA-rich marine biomass.
NAB-OM-02	Schizochytrium Biomass	DHA-rich heterotrophic biomass.
NAB-OM-03	Isochrysis Biomass	Aquaculture-feed biomass.
NAB-OM-04	Tetraselmis Biomass	Marine hatchery feed.
NAB-OM-05	Phaeodactylum (Diatom) Biomass	Fucoxanthin / EPA diatom biomass.
NAB-OM-06	Live Algae Hatchery Feed	Live-culture aquaculture feed.

05

CATEGORY • NAB-IN

Industrial & Specialty Microalgae

Scenedesmus, Botryococcus & diatom biomass

5

PROGRAMS

CODE	TRAINING PROGRAM	DESCRIPTION
NAB-IN-01	Scenedesmus Biomass	Robust wastewater-tolerant biomass.
NAB-IN-02	Botryococcus Biomass	Hydrocarbon-rich biomass.
NAB-IN-03	Chlamydomonas Biomass	Model / recombinant strain biomass.
NAB-IN-04	Diatom Biomass (Silica)	Silica & lipid diatom biomass.
NAB-IN-05	Mixed-Consortium Biomass	Polyculture biomass.

06

CATEGORY • NAB-ST

Strain, Inoculum & Media Technology

Strain isolation, scale-up & media formulation

5

PROGRAMS

CODE	TRAINING PROGRAM	DESCRIPTION
NAB-ST-01	Strain Isolation & Selection	Pure-strain isolation.
NAB-ST-02	Inoculum Scale-Up	Seed-culture build-up.
NAB-ST-03	Culture-Media Formulation	Nutrient-medium design.
NAB-ST-04	Strain Preservation & Banking	Cryo / slant strain bank.
NAB-ST-05	Strain Improvement & Adaptation	Stress-adapted strain selection.

07

CATEGORY • NAB-OP

Open-Pond Cultivation Systems

Raceway design, operation & productivity control

5

PROGRAMS

CODE	TRAINING PROGRAM	DESCRIPTION
NAB-OP-01	Raceway Pond Design	Paddlewheel raceway system.
NAB-OP-02	Pond Operation & Mixing	Circulation & aeration management.
NAB-OP-03	Nutrient & CO2 Dosing	Feeding & carbon supply.
NAB-OP-04	Contamination & Grazer Control	Culture-protection management.
NAB-OP-05	Pond Monitoring & Productivity	Growth & density monitoring.

CODE	TRAINING PROGRAM	DESCRIPTION
NAB-PB-01	Tubular Photobioreactor	Closed tubular PBR.
NAB-PB-02	Flat-Panel Photobioreactor	Flat-plate PBR.
NAB-PB-03	Column / Bubble PBR	Vertical column reactor.
NAB-PB-04	Heterotrophic Fermenter Cultivation	Dark-fermentation algae.
NAB-PB-05	Light & Temperature Control	Photo-process control.
NAB-PB-06	PBR Scale-Up & Automation	Industrial PBR scale-up.

09

CATEGORY • NAB-HD

Harvest, Dewatering & Drying

Flocculation, centrifugation & drying processes

6

PROGRAMS

CODE	TRAINING PROGRAM	DESCRIPTION
NAB-HD-01	Flocculation & Settling	Biomass aggregation.
NAB-HD-02	Centrifugation Harvest	Mechanical dewatering.
NAB-HD-03	Membrane / Filtration Harvest	Filter-based harvesting.
NAB-HD-04	Spray Drying	Spray-dried powder.
NAB-HD-05	Drum / Freeze Drying	Low-heat drying.
NAB-HD-06	Cell Disruption & Paste	Wet-biomass & paste products.

10

CATEGORY • NAB-QC

Biomass Quality, Safety & Standardisation

Composition, toxin-safety & grade standardisation

6

PROGRAMS

CODE	TRAINING PROGRAM	DESCRIPTION
NAB-QC-01	Protein & Proximate Analysis	Composition testing.
NAB-QC-02	Pigment & Nutrient Assay	Active-content testing.
NAB-QC-03	Microbial & Toxin Safety	Microcystin / pathogen testing.
NAB-QC-04	Heavy-Metal Screening	Contaminant testing.
NAB-QC-05	Food / Feed Grade Standardisation	Grade specification.
NAB-QC-06	Regulatory & Certification Compliance	Food-safety certification.

ENROL • CULTIVATE • HARVEST

Build a Career in Microalgae Production

Every program in this catalogue is delivered as hands-on training in working ponds, photobioreactors and harvest lines — covering strain isolation & inoculum scale-up, open-pond & photobioreactor cultivation, nutrient & CO2 management, harvesting & dewatering, drying, biomass standardisation, assay & QC and food-safety compliance. Mix and match programs to design a track that fits your goals.

55 training programs

10 technology streams

Unique **product code** for every module

NTHRYS OPC PVT LTD

+91-8977624748

smo@nthrys.com

www.nthrys.com