

NTHRYS

OPC PVT LTD

SECTION • BLO

Blotting & Membrane Hybridization

Hands-on wet-lab training in transfer-and-probe detection — Southern, Northern and Western blotting, radioactive and non-radioactive probe labelling, dot / slot and colony hybridization, and membrane detection, imaging and troubleshooting.

06

CATEGORIES

30

PROTOCOLS

BLO

SECTION ID

2026

EDITION

Categories & Protocols

Section **BLO** spans 6 category streams and 30 bench protocols. Every protocol carries a unique code for enrolment, tracking and certification.

BLO-S0	Southern Blotting (DNA) Transfer, probe labelling, hybridization & detection	05
BLO-N0	Northern Blotting (RNA) Denaturing transfer, RNA probes & quantification	05
BLO-WE	Western Blotting (Protein) SDS-PAGE, transfer, antibody probing & detection	05
BLO-PL	Probe Preparation & Labelling Radioactive & non-radioactive probe generation	05
BLO-DD	Dot / Slot & Colony Blotting Dot, slot, colony / plaque lift & reverse blots	05
BLO-DT	Detection, Imaging & Troubleshooting Chemiluminescent, colorimetric & fluorescent readout	05
TOTAL	All training protocols in section BLO	30

CODE FORMAT

BLO • **WE** • **01**

BLO section

WE category

01 protocol

01

■ CATEGORY · BLO-S0

Southern Blotting (DNA)

Transfer, probe labelling, hybridization & detection

05

PROTOCOLS

CODE

TRAINING PROTOCOL

DESCRIPTION

BLO-S0-01

Restriction Digestion & Gel Run

Fragment prep for transfer.

BLO-S0-02

Capillary Transfer to Membrane

DNA immobilisation on membrane.

BLO-S0-03

DNA Probe Labelling

Generating detectable probes.

BLO-S0-04

Hybridization & Stringency Washing

Target binding & wash control.

BLO-S0-05

Detection & Autoradiography

Signal capture & readout.

02

■ CATEGORY · BLO-NO

Northern Blotting (RNA)

Denaturing transfer, RNA probes & quantification

05

PROTOCOLS

CODE

TRAINING PROTOCOL

DESCRIPTION

BLO-NO-01

Denaturing RNA Gel & Transfer

Intact-RNA separation & blot.

BLO-NO-02

RNA Membrane Immobilisation

UV / heat cross-linking.

BLO-NO-03

RNA Probe Preparation

Antisense & riboprobe synthesis.

BLO-NO-04

Hybridization & Washing

Specific-binding optimisation.

BLO-NO-05

Signal Detection & Quantification

Transcript-level measurement.



■ CATEGORY · BLO-WE

Western Blotting (Protein)

SDS-PAGE, transfer, antibody probing & detection



PROTOCOLS

CODE

TRAINING PROTOCOL

DESCRIPTION

BLO-WE-01

**SDS-PAGE Protein
Separation**

Size-based protein resolution.

BLO-WE-02

Wet / Semi-Dry Transfer

Protein-to-membrane transfer.

BLO-WE-03

**Blocking & Antibody
Incubation**

Primary/secondary probing.

BLO-WE-04

**Chemiluminescent
Detection**

ECL signal generation.

BLO-WE-05

Stripping & Reprobing

Membrane reuse for targets.

04

■ CATEGORY · BLO-PL

Probe Preparation & Labelling

Radioactive & non-radioactive probe generation

05

PROTOCOLS

CODE

TRAINING PROTOCOL

DESCRIPTION

BLO-PL-01

Radioactive (³²P) Labelling

High-sensitivity probe prep.

BLO-PL-02

**Non-Radioactive (DIG /
Biotin)**

Safe haptenated probes.

BLO-PL-03

Random-Primed Labelling

Uniform probe incorporation.

BLO-PL-04

Nick Translation

Enzymatic probe labelling.

BLO-PL-05

**End-Labelling & Oligo
Probes**

5'/3' short-probe labelling.



■ CATEGORY · BLO-DD

Dot / Slot & Colony Blotting

Dot, slot, colony / plaque lift & reverse blots



PROTOCOLS

CODE

TRAINING PROTOCOL

DESCRIPTION

BLO-DD-01

Dot-Blot Setup

Direct spotting & detection.

BLO-DD-02

Slot-Blot Quantification

Manifold-based quantitation.

BLO-DD-03

**Colony / Plaque Lift
Hybridization**

Library clone screening.

BLO-DD-04

**Membrane Immobilisation &
Fixation**

Sample binding & cross-link.

BLO-DD-05

**Reverse Dot-Blot
Hybridization**

Immobilised-probe genotyping.



■ CATEGORY · BLO-DT

Detection, Imaging & Troubleshooting

Chemiluminescent, colorimetric & fluorescent readout



PROTOCOLS

CODE

TRAINING PROTOCOL

DESCRIPTION

BLO-DT-01

Chemiluminescent Imaging

ECL capture & exposure.

BLO-DT-02

Colorimetric Detection

Precipitating-substrate signals.

BLO-DT-03

Fluorescent Membrane Imaging

Multiplex fluorescent detection.

BLO-DT-04

Background & Signal Troubleshooting

Reducing noise & artefacts.

BLO-DT-05

Membrane Selection & Handling

Nitrocellulose vs PVDF use.

Transfer, probe & detect

Every protocol in Section BLO is delivered as hands-on bench training — from gel transfer and membrane immobilisation through probe labelling, hybridization and signal detection. Blotting turns a separated sample into a specific, quantifiable answer about a single target.

30 protocols

6 categories

BLO section

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