

NTHRYS

OPC PVT LTD

SECTION • GEN

Genotyping, SNP & DNA Fingerprinting / Forensics

Hands-on wet-lab training in identity and variation analysis — SNP genotyping, STR profiling and fingerprinting, forensic DNA analysis, kinship, lineage and identity testing, variant detection and analysis, and quality, standards and interpretation.

06

CATEGORIES

30

PROTOCOLS

GEN

SECTION ID

2026

EDITION

Categories & Protocols

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

GEN-SN	SNP Genotyping TaqMan, allele-specific PCR, HRM & arrays	05
GEN-ST	STR & Fingerprinting STR profiling, multiplex amplification & sizing	05
GEN-FO	Forensic DNA Analysis Forensic sampling, low-template & mixtures	05
GEN-KP	Kinship, Lineage & Identity Paternity, mtDNA, Y-STR & ancestry markers	05
GEN-VA	Variant Detection & Analysis Indel, CNV, RFLP & targeted variant sequencing	05
GEN-QC	Quality, Standards & Interpretation Allelic ladders, match statistics & databases	05
TOTAL	All training protocols in section GEN	30

CODE FORMAT

GEN • **ST** • **01**

GEN section

ST category

01 protocol

01

■ CATEGORY · GEN-SN

SNP Genotyping

TaqMan, allele-specific PCR, HRM & arrays

05

PROTOCOLS

CODE

TRAINING PROTOCOL

DESCRIPTION

GEN-SN-01

TaqMan SNP Genotyping

Probe-based allele calling.

GEN-SN-02

Allele-Specific PCR

Allele-selective amplification.

GEN-SN-03

High-Resolution Melt (HRM)

Melt-curve genotyping.

GEN-SN-04

SNP Array Genotyping

Genome-wide SNP panels.

GEN-SN-05

Mass-Spec SNP Genotyping
(MALDI)

Multiplexed SNP calling.

02

CATEGORY • GEN-ST

STR & Fingerprinting

STR profiling, multiplex amplification & sizing

05

PROTOCOLS

CODE

TRAINING PROTOCOL

DESCRIPTION

GEN-ST-01

STR Profiling

Short-tandem-repeat typing.

GEN-ST-02

Multiplex STR Amplification

Many-locus co-amplification.

GEN-ST-03

Capillary Fragment Analysis

Allele-size separation.

GEN-ST-04

VNTR / Minisatellite Analysis

Longer-repeat typing.

GEN-ST-05

Profile Interpretation

Allele-call analysis.



■ CATEGORY · GEN-F0

Forensic DNA Analysis

Forensic sampling, low-template & mixtures



PROTOCOLS

CODE

TRAINING PROTOCOL

DESCRIPTION

GEN-F0-01

Forensic Sample Collection

Evidence recovery & handling.

GEN-F0-02

Low-Template / Touch DNA

Trace-DNA analysis.

GEN-F0-03

DNA Quantification
(Forensic)

Human-specific quantitation.

GEN-F0-04

Mixture Deconvolution

Multi-contributor resolution.

GEN-F0-05

Chain-of-Custody &
Documentation

Evidence traceability.

04

■ CATEGORY · GEN-KP

Kinship, Lineage & Identity

Paternity, mtDNA, Y-STR & ancestry markers

05

PROTOCOLS

CODE

TRAINING PROTOCOL

DESCRIPTION

GEN-KP-01

Paternity / Kinship Testing

Relationship inference.

GEN-KP-02

Mitochondrial DNA Analysis

Maternal-lineage typing.

GEN-KP-03

Y-Chromosome STR (Y-STR)

Paternal-lineage typing.

GEN-KP-04

Ancestry / Biogeographic
Markers

Population-origin markers.

GEN-KP-05

Identity Matching &
Statistics

Match-probability analysis.



■ CATEGORY · GEN-VA

Variant Detection & Analysis

Indel, CNV, RFLP & targeted variant sequencing



PROTOCOLS

CODE

TRAINING PROTOCOL

DESCRIPTION

GEN-VA-01

**Indel & Microsatellite
Instability**

Length-variant detection.

GEN-VA-02

CNV Genotyping

Copy-number determination.

GEN-VA-03

Restriction Fragment (RFLP)

Cut-site polymorphism.

GEN-VA-04

Allelic Discrimination

Genotype-call chemistry.

GEN-VA-05

**Targeted Variant
Sequencing**

Confirmatory sequencing.



■ CATEGORY · GEN-QC

Quality, Standards & Interpretation

Allelic ladders, match statistics & databases



PROTOCOLS

CODE

TRAINING PROTOCOL

DESCRIPTION

GEN-QC-01

Allelic Ladders & Calibration

Accurate allele sizing.

GEN-QC-02

Genotyping QC & Controls

Run-validity control.

GEN-QC-03

Statistical Match
Probability

Random-match likelihood.

GEN-QC-04

Database Searching (CODIS-
style)

Profile-database matching.

GEN-QC-05

Reporting & Accreditation

Standards-compliant reporting.

Identify by DNA signature

Every protocol in Section GEN is delivered as hands-on bench training — from SNP and STR genotyping through forensic sample handling, kinship testing and match statistics. A handful of well-chosen markers can distinguish individuals, establish relationships and resolve identity.

30 protocols

6 categories

GEN section

NTHRYS OPC PVT LTD

+91-8977624748 · smo@nthrys.com · www.nthrys.com