Taxa from across the 'Tree of Life'

COLLECTION HOLDINGS

Museum Collections

Non-viable / non-culturable biospecimens - traditional wet / dry collections: ancient, 'vintage' & archival specimens; labile non-viable samples, dry & pinned arthropods, herbarium sheets, shells, mammal & bird skins, bones, hair, horn, plant material with silica gel, FTA™ cards, spirit collections (in ethanol, IMS, formalin); RNALater™, frozen tissue collections: biomolecular extracts, eDNA; genetic resources

Culture Collections

Cultures initiated from viable, replicable cells, tissues, organs, totipotent germplasm (clonal propagules, spores, gametes, embryos, pollen, seed, meristems, stem cells), organisms, assemblages of organisms (parasitic, symbiotic, mycorrhizal). Maintained as active cultures, under growth retarding conditions; cryopreserved in base & master collections

PRESERVATION

Type & Voucher Specimens
Preservatives
fixatives
chemicals
desiccants
silica gel
low oxygen

CONSERVATION

Biological & Genetic Resources
Metabolic
protectants
growth regulators
antioxidants
osmotica
low RH
dehydration
cryoprotectants
atmospheric
desiccation

TEMPERATURE

Ambient
enviro-control
10 - 25˚C
Refrigerated
chilling
4˚- 10˚C
mechanical
freezer
- 20˚C
- 70˚C / - 80˚C
-150˚C

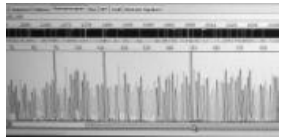
Liquid nitrogen
vapour phase
- 130°C
- 132°C
- 150°C
- 194°C

Liquid nitrogen
liquid phase
-196˚C

PRE-ANALYTICAL VARIABLES

Preservation

Low impact
Physical structure
morphology
NGS
High impact
Cell function
viability
tissue extractions
sensitive
molecular
analyses



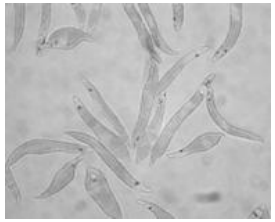
Conservation

Low impact
Viability, totipotency
molecular analyses
High impact
Structural &
morphological
characters
(stress) biomarkers

FUNCTIONALITY

Dead
Cell & bio-
structure intact
transient
metabolism

Viable
Replicable
totipotent growth



Performance Indicators
Viability
competence
stability
omics
epigenetic
genetic
reproductive
totipotency