

# Molecular laboratory

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A large array of techniques is realised in the laboratory of the Botanische Staatssammlung München: The laboratory is fully equipped for molecular studies: Extraction and storage of DNA from algae, fungi and plants, PCR amplification of DNA, gel electrophoresis and documentation, *E. coli* cloning of target DNA segments, DNA sequencing (Licor 4200), analysis of DNA sequences including the reconstruction of phylogenetic trees. Furthermore, a freezing microtome facilitates the preparation of thin sections of tissues. Thin layer chromatography is performed for the analysis of secondary lichen compounds. Lichen algae are isolated into pure culture using a single-cell manipulator. Chromosome spreading and banding is employed for chromosome counts.

Through ongoing research in the molecular laboratory, the Botanische Staatssammlung München is involved in national and international ["bar coding" efforts and activities for DNA-based species identification.](#)

