

Resource Summary Report

Generated by [dkNET](#) on Sep 6, 2026

Preparation of Fungal ITS Amplicons from Soil Samples for Illumina Amplicon Sequencing

DOI:10.17504/protocols.io.nmgdc3w

Type: Protocol

Proper Citation

Loreen Sommermann, Joerg Geistlinger, Jessica Zwanzig, Ingo Schellenberg 2018.
Preparation of Fungal ITS Amplicons from Soil Samples for Illumina Amplicon Sequencing. protocols.io dx.doi.org/10.17504/protocols.io.nmgdc3w

Protocol Information

URL: <https://dx.doi.org/10.17504/protocols.io.nmgdc3w>

Authors: Loreen Sommermann, Joerg Geistlinger, Jessica Zwanzig, Ingo Schellenberg

Summary: This protocol was used for the molecular profiling of the soil fungal community of two winter wheat fields as a part of a long-term field trial in Germany with following Illumina Amplicon Sequencing. Besides different pre-crops, the effects of soil management and fertilization on the fungal communities were investigated. Due to different aspects of our protocol, we wanted to ensure reproducing a realistic ratio of the different fungal communities in the soils. The most important steps to conform this demand being the frequently measurements of DNA concentrations at different steps of the protocol, the high numbers of PCRs of each soil sample and the use of the qPCR setting a cut-off for the PCR cycles to avoid an over-amplification of certain PCR-fragments and a loss of detectable biodiversity. The use of the two DNA isolation kits based on the cooperation with our project partner and the exchange of DNAs.

Associated Publications: Sommermann L, Geistlinger J, Wibberg D, Deubel A, Zwanzig J, Babin D, Schlüter A, Schellenberg I, Fungal community profiles in agricultural soils of a long-term field trial under different tillage, fertilization and crop rotation conditions analyzed by high-throughput ITS-amplicon sequencing. PLoS ONE 13(4). doi: [10.1371/journal.pone.0195345](https://doi.org/10.1371/journal.pone.0195345)

Affiliations: Anhalt University of Applied Sciences (AUAS), Institute of Bioanalytical Sciences (IBAS), Bernburg, Anhalt University of Applied Sciences (AUAS), Institute of Bioanalytical Sciences (IBAS), Bernburg, Anhalt University of Applied Sciences (AUAS), Institute of Bioanalytical Sciences (IBAS), Bernburg, Anhalt University of Applied Sciences (AUAS), Institute of Bioanalytical Sciences (IBAS), Bernburg

External URL: <https://doi.org/10.1371/journal.pone.0195345>

Version: 1

Publication Date: 2018

Proper Citation: Loreen Sommermann, Joerg Geistlinger, Jessica Zwanzig, Ingo Schellenberg 2018. Preparation of Fungal ITS Amplicons from Soil Samples for Illumina Amplicon Sequencing. protocols.io [dx.doi.org/10.17504/protocols.io.nmgdc3w](https://doi.org/10.17504/protocols.io.nmgdc3w)

Record Creation Time: 20210329T220528+0000

Record Last Update: 20210329T220936+0000

Data and Source Information

Source: