

Resource Summary Report

Generated by [dkNET](#) on Sep 14, 2026

DNA extraction from environmental biofilm using the NucleoSpin® Soil kit (MACHEREY-NAGEL)

DOI:10.17504/protocols.io.bd52i88e

Type: Protocol

Proper Citation

Marine Vautier, Valentin Vasselon, Cecile Chardon, Frédéric Rimet, Agnès Bouchez, Isabelle Domaizon 2020. DNA extraction from environmental biofilm using the NucleoSpin® Soil kit (MACHEREY-NAGEL) . protocols.io
dx.doi.org/10.17504/protocols.io.bd52i88e

Protocol Information

URL: <https://dx.doi.org/10.17504/protocols.io.bd52i88e>

Authors: Marine Vautier, Valentin Vasselon, Cecile Chardon, Frédéric Rimet, Agnès Bouchez, Isabelle Domaizon

Group: EcoALpsWater

Summary: This protocol is part of the DNA workflow applied in the Eco-AlpsWater Project. The methodological step described here is the extraction of DNA, this is a critical step for obtaining relevant results since molecular inventories might be influenced by the DNA extraction method used. The choice of the methodology for biofilms DNA extraction is based on previous studies and in particular on the work done by Vasselon et al. (2017) where the authors have tested 5 DNA extraction methods combining various types of cell lysis and DNA purification to extract DNA (from pure diatom cultures and biofilms samples from streams and lakes). For the Eco-AlpsWater project, after being sampled in lakes or rivers, biofilms are stored in 50 mL tubes in ethanol at 4°C, and for a maximum of 3 months before DNA extraction (the extraction should preferably be done in the month following the sampling). The DNA extraction protocol presented below has been used in several recent studies (e.g. Vasselon et al 2017ab, 2018) focussed on the application of diatoms metabarcoding; this extraction is based on a protocol adapted from the NucleoSpin® Soil kit (MACHEREY-NAGEL) with specific modifications for biofilm DNA extraction.

Affiliations: INRAE, CARRETEL, Pole R&D ECLA, Thonon les bains, France , Office Français pour la Biodiversité, Pole R&D ECLA, Thonon les bains, France, INRAE, CARRETEL, Thonon les bains, France, INRAE, CARRETEL, Thonon les bains, France, INRAE, CARRETEL, Thonon les bains, France, INRAE, CARRETEL, Pole R&D ECLA, Thonon les bains, France

External URL: [http:// NucleoSpin® Soil kit \(MACHEREY-NAGEL\) - User Manual](http://NucleoSpin®%20Soil%20kit%20(MACHEREY-NAGEL)%20-%20User%20Manual.pdf)
https://www.mn-net.com/Portals/8/attachments/Redakteure_Bio/Protocols/Genomic%20DNA/UM_gDNAsoil.pdf

Version: 1

Publication Date: 2020

Proper Citation: Marine Vautier, Valentin Vasselon, Cecile Chardon, Frédéric Rimet, Agnès Bouchez, Isabelle Domaizon 2020. DNA extraction from environmental biofilm using the NucleoSpin® Soil kit (MACHEREY-NAGEL) . protocols.io
[dx.doi.org/10.17504/protocols.io.bd52i88e](https://doi.org/10.17504/protocols.io.bd52i88e)

Record Creation Time: 20210329T220521+0000

Record Last Update: 20210329T220849+0000

Data and Source Information

Source: