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(official) Sample Collection in Herbarium Collections - Protocol#0

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Protocol status: Working
We use this protocol and it's working

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Keywords: sample collection in herbarium collection, herbarium collection, vast collection of plant specimen, herbarium, plant specimen, collecting plant material, specimens suitable for research, selecting specimen, protocol for sample collection, sample collection, plant material, plant, vast collection, sample, collection, amount of dry material, document, ample material

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Abstract

This document outlines the protocol for sample collection from Herbarium specimens. The Herbarium houses a vast collection of plant specimens, managed by a designated individual. This person is responsible for selecting specimens suitable for research or other purposes.

When collecting plant material, it is crucial to maintain homogeneity by choosing parts that are similar in size and appearance. Furthermore, the amount of dry material collected should not exceed 50 milligrams. While this may seem small, it ensures that ample material remains accessible to other users.

The primary objective is to utilize the Herbarium's resources responsibly and sustainably, ensuring its value as a critical resource for future generations.

Troubleshooting

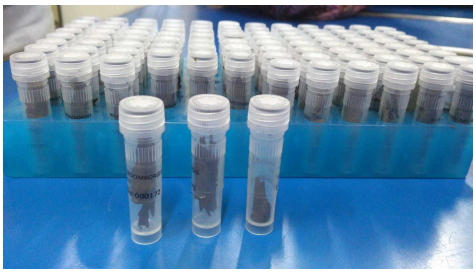
Preparation for collection

1 Organize every sample that will be used in each study into an EXCEL Sheet;
- include information and comments on every sample
- have information about classification grouping on every sample
- each sample should also have the filename for their analytical data indexed (these can be added afterward)
- this file might/should be used as Metadata for the study
- Column Headers should be (at least): Sample Number - Sample Name - Sample Group Info - Comments - (MS_filenames) - (NMR_filenames)
- New columns may/should be added during the study to specify analytical filenames and eventual issues that might occur
- Add a Code header to be used as labels for the samples in every step of the sample preparation procedure

2
- Separate the number of empty 2 ml Screw Cap Microtubes
- Print N versions of each label with the chosen code, name of the responsible, and date. This includes eventual QCsamples to be defined by each study
- Pre-label the empty 2 ml Screw Cap Microtubes
- Locate positions of Quality Control Samples and the Blank samples

Collection of samples

3 In the Herbarium, the responsible will select the specimens that can be used, meaning those that are available for this study
- Users should not collect more than you need, as there is a limited amount of plant material available and it should be conserved for future use
- It's essential to keep it homogeneous, meaning that you should collect parts that are similar in size and appearance
- Users should aim to collect no more than 100 milligrams of dry material as the sample preparation part will use 50 mg
- Users can collect small pieces of leaves or other parts



~50 mg of dry leaves.

Notes

4 1. Keep each BATCH within 100 samples including the Quality Control Samples and the Blank samples
2. Collect samples into clean mictorubes and store them in the freezer
3. The next protocol for this study will start by weighting 50 mg of this dry material into a 2 ml Screw Cap Microtubes (high quality; e.g. SSibio) for Homogenizer (e.g. FastPrep MPBio)

To be continued...

5 See https://www.protocols.io/view/official-extraction-of-herbarium-material-for-che-cmuku6uw

Protocol references

https://doi.org/10.1016/j.phytol.2020.01.021