Technical protocol - Procedure for sampling pollen

Required material:

- Sampling tube (ideally 50ml) or recipient (e.g. plastic box) for larger flowers
- Waterproof marker
- Cellphone (with camera, meteo and map app)
- Bag or box to transport and protect the sample(s) from light

Steps:

1. find a flowering plant
2. sample the pollen by shaking the tube/recipient when holding the flower into it
3. mark the tube/recipient with the sample name according to the process protocol
4. put the tube in the bag/box
5. take some pictures of the plant: a) full plant and its environment and b) close-up photo of the flowers/leaves
6. note the exact time
7. note the exact geographic coordinates of the plant
8. note the temperature and humidity at your location
9. evaluate the wind and note it according to the scale in the process protocol
10. bring the sample back to the lab

Poleno specific

11. air clean the Atomizer and cuvette and put ~1 spatula of pollen in the cuvette
12. install the Atomizer on the Poleno, start the “measurement campaign” mode and check “non-operational mode” + “no-classification” under “status and control”
13. start aerosolisation: find air and vibration parameters to have a stable rate between 200 and 300 particles/min (default to start : 60 Hz, 15% vibration, 15% air, !! highly dependent on your atomizer!!)
14. after reaching 10-12’000 events, stop the Atomizer and run the cleaning cycle 2x

No more Poleno specific

15. get the remaining pollen from the cuvette and use it for a microscope slide: with the spatula, disperse very few pollen on a clean slide, cover the pollen with transparent tape, mark the slide
16. under the microscope, observe and take pictures at different magnifications and different angles, representing as best as possible the content you observe on the slide

17. empty the cuvette in the collection content (50ml tube), place a double layer of tissue on the aperture of the tube, hold it with an elastic (or tape) and let the pollen dry in a dark place (drawer, cardboard box, …) in ambient air for a few days, moving it regularly
18. air clean the Atomizer
19. place all the images and the protocol form completed in a single file named after the sample
20. fill in the metadata database file (db_metadata_pollen_base.xlsx)
21. once dry, close the tube and store it in a dark, dry place (drawer, box, …)