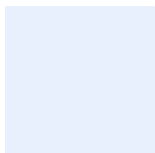


Protocol for pollen sampling – Process

DATE	Ex: 01.01.2023	FULL NAME	Ex: John Smith
COUNTRY	Ex: Switzerland	INSTITUTION	Ex: MeteoSwiss
LOCATION (ZIP code)	Ex: Payerne		

OUTDOOR

- 1) Create the **SAMPLE_NAME** as follows: countrycode_location_initials_year_month_day_number
countrycode is the ISO 3166 alpha-2 code
initials are the first two letters of your name and the first letter of your surname
number is 1 unless the same person has several samples on the same place/date, then increment by 1 for each new sample
SAMPLE_NAME: Ex: CH_payerne_smj_2023_01_01_1
- 2) Prepare a clean Falcon 50 tube and annotate it with the **SAMPLE_NAME**
- 3) Sample pollen in the tube
- 4) Close the tube and note the **TIME** Ex: 13:30 (CET)
- 5) Take a photo of the whole plant and several photos of characteristic parts of the plant (e.g. flowers, leaves, trunk, etc.). Store them in a dedicated folder. (Optional: upload them here below in the form)



and note the coordinates (WGS)

LATITUDE: Ex: 46.81325

LONGITUDE: Ex: 6.94272

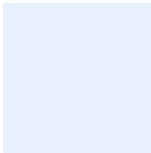
- 6) Give some meteorological information:
 - a. **TEMPERATURE** (°C): Ex: 10
 - b. **RELATIVE HUMIDITY** (%): Ex: 80
 - c. **WIND** (Beaufort scale):
 - ☐ 0: Calm and still -> pollen rises/falls vertically
 - ☐ 1: Light wind (1 to 5 km/h) -> pollen drift shows wind direction
 - ☐ 2: Light breeze (6 to 11 km/h) -> wind can be felt on face, flag ripples
 - ☐ 3: Gentle breeze (12 to 10 km/h) -> flag waves
 - ☐ 4: Gentle breeze + (20 to 28 km/h) -> paper and leaves are scattered
 - ☐ 5: Fresh breeze (29 to 38 km/h) -> small trees sway, whitecaps form on waves

and **comment** on whatever could be of interest (ex: particular location of the plant, changing weather ...)

Ex: The tree is in the city centre, in a completely urban environment, with little soil.

INDOOR

- 7) Remove eventual debris from the sample
- 8) Prepare ~ 1mm of pollen in a cuvette and start the Reference Data Generation, see technical protocol
- 9) Note which Poleno and Atomizer you use:
 - a. **POLENO_ID**: Ex: P27
 - b. **ATOMIZER_ID**: Ex: MCH1
- 10) For each parameters of the Atomizer, note the range of values you used to obtain a stable particle rate:
 - a. **VIBRATION_FREQUENCY** (Hz): Ex: 64
 - b. **VIBRATION_AMPLITUDE** (%): Ex: 17-21
 - c. **BLOWER_SPEED** (%): Ex: 17-22
- 11) Deposit sparse pollen on a slide and fix it with adhesive transparent tape (Scotch®), label the slide with the **SAMPLE_NAME**
- 12) Look at the slide under the microscope and note any particular **observation**
Ex: ~10% of the grains are broken
- 13) Take a (few) picture(s) showing a few pollen grains and note the **magnification** Ex: 60x



- 14) Once you finish the RDG, put the remaining pollen of the cuvette back in the Falcon 50 tube with the rest of the sample. Let the pollen dry naturally in the tube for 2-3 days by placing a coffee filter/tissue with an elastic instead of the cap. Move the tube regularly so that the pollen does not aggregate. Keep it protected from light.
- 15) Once the pollen is dry, put the original cap back and store the sample in a dark place with stable conditions (box, drawer or fridge/freezer).
If you did not store any sample, please check the box and explain why:
☐ No sample, reason: Ex: the pollen has moulded

* * * END * * *

Please always annotate your preparations with the **SAMPLE_NAME**. Store samples under stable conditions and protected from light.

This protocol corresponds to the metadata database structure as illustrated in the relational schema (Figure 3 of the associated data publication) according to the widely accepted Business Process Model and Notation (BPMN). All **VALUES** with a capital, bold names are stored as metadata. The base file for this metadata database is [db_metadata_pollen_base.xlsx](#)

If you have any question or suggestion, feel free to contact the author:
sophie.erb@meteoswiss.ch