**SOP: RAMPT installation**

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1. **Purpose**

Explaining the installation of the raw to annotation metabolomic pipeline tool (RAMPT).

1. **Procedure**
   1. **Introduction**

RAMPT is a tool for combining mass-spectrometry data analysis with mzmine and following annotation with SIRIUS and GNPS into one program. The program is accessible through the command line (albeit in separate steps) and through a graphical user interface (GUI).

The installation can happen in two ways. Either through an installer, or through cloning the Github repository and installing the dependencies yourself.

* 1. **Material / Preparations**

To follow along, you need:

* + 1. Internet connection
    2. A working browser
    3. A working Linux/MacOS/Windows machine (Testing happens on the latest version of the mentioned operating systems)
  1. **Methods / Procedure**

Installing the application via the official installer:

* + 1. Fetch the correct installer for your machine at: <https://github.com/JosuaCarl/RAMPT/releases>
    2. Open the downloaded installer. You may be prompted (in particular by Windows) whether you want to allow the installation from an unknown source. This is of course up to you, but the installation is only possible if you accept execute it further.
    3. Now select, what you want to install. Upon selecting one of the suggested programs, the installer will look for the program in your computer (i.e. PATH) and only install it if it is not already present. Keep in mind, that the version is not updated. If you have an older version than supported, please install the newer version manually. RAMPT depends on multiple other programs outside of python:
       - Sirius >6.0.0
       - Mzmine > 4.2
       - Msconvert
    4. After this, please accept the license and choose an install folder. The installation starts after you have chose a path.
    5. This may take a while to finish, please be patient, as the progress bar does not always display changes immediately.
    6. Once the computation is complete, you can find a shortcut at $HOME/.local/bin. $HOME usually is /home/user/ in linux and MacOS and C:\Users\your\_user\_name\ with Windows. You can copy the shortcut anywhere you’d like. RAMPT can be started by just executing the shortcut (double-click).

Installation via git clone:

* + 1. Install uv
    2. Execute: git clone <https://github.com/JosuaCarl/RAMPT.git> & cd RAMPT & uv sync
    3. You will need to install Sirius, msconvert and mzmine by hand. Please refer to their respective manuals for doing so.
  1. **Results**

You should now have an open window in a browser, which displays RAMPT and the folders $HOME/.rampt and your\_install\_path/rampt should exist.

* 1. **Troubleshooting**

If there is any trouble during these steps, please post an issue at <https://github.com/JosuaCarl/RAMPT/issues>.

1. **References**

<https://github.com/JosuaCarl/RAMPT>

<https://github.com/JosuaCarl/RAMPT/blob/main/Manual.md>