

## MONOWAVE 400

1. **Switch on a fume hood** (turn the button from [0] to [I]. Lift the hood protective glass: press [^] on display.
2. **Turn on nitrogen gas** (turn to maximum the green seal labeled "N<sub>2</sub>" on the fume hood).
3. **Check the pressure** on the pressure regulator (pressure level 4,5 bar). If the nitrogen pressure decreases, the device makes a squeaky sound during measurement.
4. **Switch on Monowave 400** (left side close to the electrical cable).
5. **Lock to your account** (if you don't have it, contact Katerina.Tmejova@ceitec.vutbr.cz).
6. Create a new experiment:
  - a) Tap <Task list> on the main screen.
  - b) Tap [A] in the last row of the experiment column. The experiment name dialog opens.
  - c) Enter the name of the experiment.
  - d) Tap <OK>.
  - e) Select <Standard> and tap <OK>. The "Add Experiment" dialog opens.
  - f) Add all necessary steps. The temperature range is 15 °C – 300 °C.
  - g) Enter the vial type.
  - h) Tap <OK>.

You can add other steps ("Heat to temperature in time", "Hold time", etc.). Tap <Insert steps > on the main screen. The explanation of steps is in the User manual, page 69.

7. Copying an existing experiment:
  - a) Tap <Task list> on the main screen.
  - b) Highlight the experiment (XXX) you want to copy.
  - c) Tap <Copy> to copy the highlighted experiment. The name of the first copy will be "XXX\_copy1".
8. View of experiment details:
  - a) Tap <Task list> on the main screen
  - b) Highlight the experiment you are interested in.
  - c) Tap <Details>. You can see the graph and experimental condition.
  - d) Tap <Home> back to Task list
9. Data export:
  - a) Export your results: Tap <Menu> and select "Data Memory > Browse Results".
  - b) Tap <Export>.
  - c) Select a/the result (s).
  - d) Tap < Export>.
  - e) Choose the file type of the export.
  - f) Select the desired printout settings.
  - g) Tap to confirm the settings. The data is exported/printed.
10. **Switch off nitrogen gas and the device. Close and switch off also a fume hood.**
11. **Clear all glassware.**

### NOTE:

- a) Filling of vials: 10 mL (G10) 2-6 mL, 30 mL (G30) 6 – 20 mL.
- b) Check the septa. Insert septa to snap cap (silicon – blue part - up, Teflon – white part – down).
- c) If you work with G10, use an adaptor ring.
- d) Point of boiling: attention to the boiling point of solvents versus cooling temperature (lower cooling temperature than a boiling point).
- e) Don't use acids and hydroxides like solvents (due to aerosol creation).
- f) For recording or taking pictures of the experiment, connect a USB key to the reactor.