Binding rules for working in the OC-II-Praktikum

1. Before starting a reaction – Antestat (= oral examination)
After students assembled their glassware for the planned reaction an assistant has to check 1) the buildup apparatus, 2) the lab journal and 3) the knowledge of the student. After approval, the reaction can be started.

**Apparatus**
- Is the apparatus safe to use (Cables away from sources of heat, water hose securely fixed, etc.)

**Preparation accompanying sheet - LabCard**
- All necessary data filled in (Reaction scheme, lab no., date and name, etc.)

**Lab journal**
- Reaction scheme
- Amount of chemicals to be used
- Safety related data of chemicals and processes (e.g. vacuum)
- H and P sentences in tabular form.

**Knowledge**

*Oral examination on planned reaction touching themes like mechanisms, procedures, work up and safe garbage disposal.* If you gained the impression that the student knows what he/she is going to do and all requirements regarding laboratory safety are fulfilled, you sign the LabCard and students are permitted to start their reaction.

**Further procedure**

😊 If the reaction apparatus is correctly and safely assembled and all required data are found in the lab journal and the student knows details and risks of the reaction, the assistant signs the lab journal and the LabCard adding date and time. The LabCard goes in the clear plastic holder fixed atop each lab place in the fume cabinets where it stays till the end of the reaction. The student is permitted to start the reaction.

😊 If there are doubts on the students’ knowledge, the safety of the apparatus or errors in the lab journal, the assistant notes this in the lab journal with his signature and time. After correction by the student a second assessment is done. If this still is not satisfying the students is sent home for the remaining day (This has to be noted in the lab journal!)

**General remarks**

Start of reactions is only permitted before 17:00 (Main lab L6) and earlier than 16:30 (Night lab L5).

2. After completion of the reaction – hand in of compounds, lab journal and protocol
Compounds and protocols are handed in together with the signed LabCard. We accept compounds only if the LabCard/lab journals show:
- Signed Antestat
- Lab journal according to "Rules for a lab journals" (see 3. How To)

*If the Antestat is missing or the lab journal does not comply with below rules the compound and protocol are confiscated and the preparation has to be repeated.*

*If the Antestat is correct and the lab journal was written in accord to the requirements the handed in protocol and compound is acknowledged on the “Laufzettel” with signature & date (left column). After approval of protocol and compound purity a second signature is placed on the “Laufzettel” (right column) and the preparation is passed.*

*If the compound does not comply with the requirements of the lab course (m.p., b.p., refractive index incorrect) the preparation has to be repeated. Compound purity will be checked by NMR and GC-MS.*

3. Rules for lab journals – How To
The lab journal is a multipage, hard bound booklet (e.g. exercise book) with numbered pages. Reserve one double-page per experiment. Use permanent ink, no pencil! And note down all your own observations. Do NOT copy procedures.

*Outline as follows:*
- Title, date, used literature
- Reaction scheme with calculated molecular weights of all involved compounds
- Table with molar equivalents, and used amounts

*Next:*
- Your own observations, deviations from literature, encountered problems, etc.

And finally:
- Calculated yield, analytical data in comparison to literature data
- Discussion

*Your lab journal is written during the experiment or immediately after and serves as the source of exact data for writing the protocol! Errors in writing or calculating are just crossed out in a way that they are still readable, no eraser, correction tape, etc. An example is to be found on the home page of the course.*