

Checklist | How to correct a protocol

1. Formal criteria:

- The layout of the protocol is nice and clear;
- Protocol was handed in electronically on the website as a PDF with less than 10 MB;
- Scientific writing style (i.e. objective, formal, unambiguously).

2. The protocol is complete and contains:

- A *front page* containing the following elements:
 - Name of the course;
 - Abbreviation and name of the experiment (i.e. IU2 Gravitationskonstante);
 - Date when the experiment was carried out;
 - Names of both students;
 - Name of the assistant;
 - Expenditure of time for the lab report in hours (incl. evaluation and writing);
 - The following declaration on scientific integrity:

Hiermit erklären wir, dass diese Ausarbeitung von uns selbständig angefertigt wurde und keine Kopie (auch nicht auszugsweise) einer schon bestehenden Ausarbeitung ist. Uns ist bekannt, dass bei Nichtbeachtung der entsprechende Versuch wiederholt werden muss. Weiterhin erklären wir, über die Regularien des Anfängerpraktikums in Kenntnis gesetzt worden zu sein und diese Regularien zu berücksichtigen und zu akzeptieren. Uns ist auch bekannt, dass wir bei groben Regelverstößen und/oder wissenschaftlichem Fehlverhalten aus dem Anfängerpraktikum ausgeschlossen werden können.

- Introduction* with the purpose of the experiment in 5 to 10 sentences (abstract);
- Summary of *theoretical background* in own words (in brief, not a copy of the manual, but a summary of the essentials needed to explain this experiments measurements, including important formulas);
- Description of the *experimental setup and procedure* (i.e. everything needed to make the experiment reproducible), including a picture of the setup;
- Evaluation* part with neatly display of the measurements, readings and assumptions as well as comprehensible calculations;
- Every determined observable has to have a proper *error estimation* with systematic and/or statistical error propagation;
- Conclusion* with the final results and a critical discussion in a few sentences, including a comparison to a literature value. All questions from the evaluation part of the lab manuel have to be answered;
- Complete index of *references*;
- Full *measurement data* in the attachment including systematic errors.

3. Requirements for figures and plots:

- Graphs are scaled reasonably, have fully labeled axis (i.e. physical quantity and unit), contain a fit or distribution function (with parameters) and a legend;
- All figures and plots have captions explaining and describing the illustration (i.e. what can we see? Where is the data from? Which fit/distribution has been chosen?).

Please only accept a protocol, if you can check every box.