

## Abstract

Chemical experiments are an important part of high school chemistry education. The main advantage of chemical experiments is fact that pupils effectively connect their theoretical knowledge with what they can see. Furthermore, pupils' competencies improve. This bachelor thesis focuses on experiments with blue colored chemicals which can be easily obtained. Chemicals used in these experiments are common compounds found in school laboratories or easily obtainable food, beverages etc. The theoretical part of this bachelor thesis contains information about structure and chemical properties of the chemicals which make a basis for experiments mentioned in the practical part. Additionally, experiments described in the practical part, which were designed and performed, are based on most known experiments with the chemicals described in the theoretical part. Further description of these experiments and their photo documentation can be found in the practical part, too. Evaluation of these experiments involves their integration into thematically focused worksheet. Four thematically focused worksheets were created according to the national curriculum of the Czech Republic for grammar schools (RVP G) and to the school curriculum of Gymnázium Botičská (ŠVP).