

Abstract

Diploma thesis presents topic Classifying chemical reactions that was elaborated on the principle of inquiry based science education. The handbook for teachers, which is a part of the thesis, contains two variants of structured inquiry and two variants of guided inquiry. There are also methodical instructions for teachers, a list of chemicals, the procedure for carrying out the reactions and photo documentation of experiments, including measured graphs of pH and redox potential (PASCO probeware). Inquiry-based science education has the potential to develop key competences, which are becoming an important goal of education at all levels of education. The key competencies are included in the Czech curriculum, the Framework Educational Program for Grammar schools. The next part of the thesis was preparation of the questionnaire focused on developed key competencies. Students that performed laboratory session with the new developed material on topic classification of chemical reaction filled in the questionnaires after their work. The results showed that during the work students had the opportunity to develop five key competences.