

This Bachelor's thesis deals with preparation of the intermediates of the analgesic tapentadol. The chosen synthetic strategy requires a preparation of appropriate derivatives of 3-phenylpentanoic and 3-phenylpent-2-enoic acid. Synthesis of those derivatives represents the cornerstone of the thesis. In the first part, the thesis describes an effort associated with a preparation of 1-[(3-benzyloxy)phenyl]propan-1-one, a necessary intermediate for the preparation of the titled compounds. Then addition reactions were studied on the aforementioned ketone. The second part of the thesis focuses on one particular addition, a Reformatsky reaction, and deals with further optimization. In addition, the submitted thesis also describes variety of attempts to carry out dehydration of the Reformatsky adducts, namely, benzylic tertiary alcohols.