

The content of presented bachelor thesis is the preparation of dihydrogenphosphate of deuterium marked N-methyl-4-methylpyridinium for its future study by the neutron spectroscopy. By the neutron spectroscopy will be studied mechanism of proton conductivity of this salt.

Precursors of the organic cation were deuterated several different ways. As the most efficient was evaluated deuteration in repeatedly exchanged solution of potassium carbonate and sodium hydroxide in heavy water.

Efficiency of deuteration was measured by IR spectroscopy, ^1H and ^2H NMR spectroscopy.