In the treatment of acute intoxications, one of the treatment procedures is an antidote submission, e.g. diosmectite and activated charcoal, where an antidote is a substance which acts antagonistically and disturbingly with the toxic effect of a toxic substance. The aim of this work was to compare the adsorption capabilities of activated charcoal and diosmectite in selected model compounds which are the most common originators of acute intoxications in the adult population of the Czech Republic. The actual comparison of adsorption capabilities of these sorbents was preceded by issues search processing of ten groups of substances that cause the most acute intoxications and subsequent testing of the proposed method for future detailed testing of adsorption and adsorption efficiency of different sorbents. Of the ten groups of substances five model compounds were selected: dosulepin, acetylsalicylic acid, ibuprofen, promethazine and phenobarbital, on which adsorption of diosmectite, activated charcoal, and mixture of these sorbents was compared in the experimental part of this work. This comparison of the adsorption capabilities of sorbents was carried out not only under neutral conditions, but also in an alkaline and acidic environment which simulated physiological conditions in different parts of the gastrointestinal tract where these sorbents can theoretically operate.

Key words: smecta, diosmectite, activated charcoal, poisonings