

phobic molecules [2, 3]. Sertraline hydrochloride is one of them. It is an anti-depressant with low solubility in water. To increase the bioavailability of the oral-taken drugs it is worth to check influence of the cyclodextrins on those substances. Cyclodextrins are able to improve solubility of the guest drug inserted into their cavities and make the drug absorption in the gastrointestinal tract more effective.

One of the methods to examine the complex formation between drugs and cyclodextrins is the isothermal titration calorimetry (ITC). The set of parameters of interaction given by this experimental method brings information about the strength and the energetic aspects of complex formation between guest and host molecules.

In this work the interaction parameters from ITC measurements like binding constant, enthalpy, entropy and Gibbs energy of binding cyclodextrin with sertraline hydrochloride in water at 298.15 K are presented. The parameters of complex formation are compared with each other and with available literature and the conclusions are made.

#### REFERENCES

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### INTERACTION BETWEEN B-CYCLODEXTRIN AND SELECTED FUNGICIDE AND PESTICIDE IN WATER

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Cyclodextrins are cyclic oligosaccharides. Most popular consist of 6, 7 or 8 glucose units combined with  $\alpha$ -1,4-glicoside bonds forming a torus structure. These compounds, due to their characteristic structure, hydrophobic interior and external polar part of molecule, includes hydrophobic ligands. This unique property of CDs which stems from their cavitory structures led to wide uses in pharmaceuticals, foods, chemicals, cosmetics and pesticides.

Pesticides are substances meant for attracting, seducing, and then destroying, or mitigating any pest. They are a class of biocide. These compounds are necessary in closed cultures where high humidity and favorable temperatures

cause rapid growth of many species of fungi. Fungicides and herbicides are sparingly soluble in water. Most commercially available products contains biologically active compounds dissolved in organic solvents, which are often neutral to the environment, human and animal health.

The main goal of our research was to study the impact of  $\beta$ -cyclo-dextrin to increase the water solubility examined (tebuconazole, MCPA) plant protection products. To examine the complex formation between biocides and cyclodextrins we used isothermal titration calorimetry (VP –ITC). For the determination of concentration of pesticides we used UV-VIS spectrophotometer Specord 50. The set of parameters of interaction given by these methods brings information about the strength and the energetic aspects of complex formation between CDs and fungicides.

### **PUMPKIN FRUIT'S AND JERUSALEM ARTICHOKE TUBER'S FLOUR INFLUENCE ON MEAT QUALITY INDEXES OF BROILER CHICKEN'S BEAST MUSCLE**

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Growing demand for poultry meat has resulted in pressure on breeders, nutritionists and growers to increase the growth rate of birds, feed efficiency, size of breast muscle and reduction in abdominal fatness [2]. Nutrition is an external factor with major influence on the muscle characteristics of broiler chickens [3]. Accordingly, to improve production performance, supplementation of natural components in poultry rations is widely adopted in the world. There is an evidence suggests that some of these components have different active substances [1]. Jerusalem artichoke contained inulin, other dietary fibres, and a small amount of polyphenol [5]. Pumpkins are considered to be a rich source of pectin, carotene, minerals, vitamins and dietary fiber [4].

The aim of this research was to examine the influence of pumpkin fruit's and jerusalem artichoke tuber's flour on broiler chicken's breast muscle's quality indexes.

The research with broiler chickens was carried out from 1 to 42 days of their age in a personal farm in Lithuania. There were formed three analogical broiler chicken groups: control group and two experimental groups. Broiler chickens from all groups were fed and held under the same conditions, except for I experimental group's broiler chickens which were additionally given jerusalem artichoke tuber's flour (13.0 pct. of their feed were replaced by jerusalem