

## **Abstract**

Fungi obtain energy and nutrients from organic matter degradation, using sugars for growth, which can range from simple hexoses up to complex polysaccharides. Cereals provide a rich source of nutrients for microbial growth and are at risk of infestation by fungi during storage. The objective of this study was to investigate the influence of carbon sources represented by grinded grains from three cereal species: wheat, corn and barley; on the activity of Krebs cycle dehydrogenases and on glucose dehydrogenase in saprophytic fungus *Rhizopus nigricans*. Enzymatic assays were performed in intervals of 5, 10 and 15 days from fungus mycelium, using Sîsoev method, modified by Artenie. The obtained results pointed out that dehydrogenases involved in Krebs cycle and in pentose phosphate pathway are influenced both by the amount and nature of carbon source and by the fungal culture age. Thus, in the first time interval values are maintained at moderate levels, in the second period enzymatic activity increases significantly and in the last time interval, along with nutritional resources depletion, enzymatic activity is extremely low in most experimental variants

**Key words:** *Rhizopus nigricans*, cereal caryopses, dehydrogenases.