

EFEKT KLUYVERA U DROŹDŹY *SCHWANNIOMYCES* SP.

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1. Drożdże *Schwanniomyces* sp. oraz ich amylazy. 2. Efekt Kluuvera jako jeden z podstawowych mechanizmów regulacyjnych u drożdży *Schwanniomyces* sp. 3. Podsumowanie

The Kluuver effect in yeast *Schwanniomyces* sp.

Abstract: Yeast *Schwanniomyces* sp. and other yeast species can grow on maltose and other saccharides aerobically, but they cannot grow on these sugars anaerobically or in the absence of respiration. Assimilation of these carbon sources occurs only under respiring conditions. The phenomenon has been known by the classical name of the Kluuver effect. This effect is widely observed in utilization of different nonglucose sugars by many yeast species. Although the reason for this apparent dependence on respiration for the assimilation of certain sugars is not clear, the phenomenon does appear to be brought about by the interplay of several factors involving lowered rate of transport and metabolism of certain sugars. The Crabtree-positive yeasts, eg. *Saccharomyces cerevisiae*, are Kluuver-negative generally, but Crabtree-negative strains shows this phenomenon very often. This paper presents the main hypothesis on the presence of Kluuver effect in Crabtree-negative yeast *Schwanniomyces* sp. This phenomenon has practical importance because glucose is not the main sugar substrate in fermentative processes.

1. Yeast *Schwanniomyces* sp. and its amylases. 2. The Kluuver effect as one of the principle regulatory mechanisms in yeast *Schwanniomyces* sp. 3. Conclusions

Słowa kluczowe: amylazy, drożdże, efekt Kluuvera, *Schwanniomyces* sp.

Key words: amylases, yeast, Kluuver effect, *Schwanniomyces* sp.