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Uticaj niskofrekventnog magnetnog polja (10-50 Hz) na respiracionu aktivnost ćelija kvasca *Saccharomyces cerevisiae*

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Ispitivanje uticaja električnog, magnetnog i elektromagnetnog polja na mikroorganizme je veoma aktuelni predmet istrazivanja, jer ova fizička polja potencijalno deluju kao faktori stresa i tako utiču na mikrobni metabolizam i preživljavanje. U ovom radu ispitivan je uticaj niskofrekventnog magnetnog polja (MP) sa konstantnim intervalom skeniranja od 10 do 50 Hz na respiraciju ćelija kvasca, *S. cerevisiae*. Eksperiment je rađen u pet ponavljanja i praćen Micro-Oxymax® respirometrom. Kumulativna potrošnja kiseonika je bila manja kod ćelija izloženih MP u svih pet ponavljanja, dok je produkcija CO_2 bila nekonzistentna. Međutim, ove razlike u potrošnji O_2 i produkciji CO_2 su statistički značajne. Iako su dodatna ispitivanja neophodna, dobijeni rezultati ovih inicijalnih eksperimenata predstavljaju dobru osnovu za dalja istraživanja u ovoj oblasti.

Influence of the low frequency magnetic field with scan regime from 10 Hz to 50 Hz on *Saccharomyces cerevisiae* respiration

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The analysis of the electric, magnetic and electromagnetic fields influence on microorganisms is a very popular research topic, since these fields could potentially act as stressors and affect the microbial metabolism and survival. The aim of this work was to investigate the influence of the low frequency magnetic field (MF) with scan regime from 10 Hz to 50 Hz on *S. cerevisiae* respiration. The experiment was performed in five replicates and monitored using the Micro-Oxymax® respirometer. All five experiments showed lower cumulative O_2 consumption in MF exposed samples, compared to the control sample and inconsistent cumulative CO_2 production. However, these differences in O_2 consumption and CO_2 production were statistically significant. Even though additional experiments are necessary, these results strongly suggest that this is a good basis for further investigation in this field.