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APPLICABILITY OF THE SPECTROSCOPY IN THE ANALYSIS OF SCUBA DIVERS RESPIRATION

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Abstract

Scuba diving could increase free radicals production which acts as signaling molecules to induce adaptation against oxidative attack. The aim of the new research was to study the impact of scuba diving effects on multiple gas composition responses from the exhaled breath of professional divers. Ethylene, ammonia, and carbon dioxide concentrations from diver's respiration were measured before and after the immersion to 8 m depth in the Black Sea. The ethylene gas (for oxidative stress condition), the ammonia gas (for proteins degradation) and the carbon dioxide gas from the respiration of the six divers, were evaluated by mean of the breath test using infrared laser absorption spectroscopy. The experimental results for each breath test of scuba divers will be presented and discussed.

Keywords: divers, gases emission, respiration assessment, spectroscopy

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