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RESEARCH NOTES

CO_2压缩与解压速率对酵母菌代谢的影响

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摘要 The influence of compression and decompression rates of carbon dioxide on the physiology of Aloidia sorculus and Saccharomyces cerevisiae was investigated. Besides parameters such as pressure, temperature, exposure time, water content, and initial pH, the influence of either compression or decompressionrate on the biological behavior of microorganisms was quite essential. For both microorganisms studied, an optimal rate for either compression or decompression process exists due to the integrated effect of pressure, exposure time as well as compression or decompression speed. The decompression rate has no significant effect on cell's viability after 180 min exposure in compressed CO2 because almost all the microorganisms were died before decompression.

关键词 酵母菌;一株真菌; 高压微生物; 微生物; 分离技术; 微生物生理学;

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Effects of CO2 Compression and Decompression Rates on the Physiology of Microorganisms

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Abstract The influence of compression and decompression rates of carbon dioxide on the physiology of Aloidia sorculus and Saccharomyces cerevisiae was investigated. Besides parameters such as pressure, temperature, exposure time, water content, and initial pH, the influence of either compression or decompressionrate on the biological behavior of microorganisms was quite essential. For both microorganisms studied, an optimal rate for either compression or decompression process exists due to the integrated effect of pressure, exposure time as well as compression or decompression speed. The decompression rate has no significant effect on cell's viability after 180 min exposure in compressed CO2 because almost all the microorganisms were died before decompression.

Key words Aloidia; Industrial activity; Aloidia sorculus; Saccharomyces cerevisiae; Aspects of CO2;

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