Effect of N source on cell growth and fatty acid accumulation of microalgae

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Docosahexaenoic acid(DHA) is an omega-3 polyunsaturated fatty acid that plays an important role in the prevention and treatment of a number of human diseases such as heart and inflammatory diseases. Most of commercialized DHA products were originated from fish oil. However, heavy metals, low DHA contenst and fish odors have a negative effect on improving DHA usage for food and supplement industries. A marine microalgae Aurantiochytrium limacinum SR21 is known to accumulate significant amounts of omega-3 fatty acid. We examined the growth behavior and pH change under mixed N source on batch bioreactor cultures.