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Preliminary Evaluation of the Pigments Content from
Rhodobacter sphaeroides at Stages during Photosynthetic Growth

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Abstract

Under photosynthetic growth, purple non-sulfur photosynthetic bacterium *Rhodobacter sphaeroides* can use a diverse array of substrates for the source of carbon donor. Substrates such as acetate and succinate are most commonly used to study energetic and metabolic networks, especially in the production and consumption of NADPH during the citric acid cycle (TCA cycle) and ethylmalonyl-CoA pathway, respectively. Although the utilization of both substrate, the bacterium will grow at different growth rate and this also influence the biosynthesis of photosynthetic pigments as important components for overall photosynthesis. For this study, *Rhodobacter sphaeroides* strain 2.4.1, GA and G1C have been grown in acetate and succinate. Here, preliminary results on the evaluation the pigment ratio at different stages of the growth is reported, especially on the growth in succinate substrate.

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Keywords: Bacteriochlorophyll, carotenoids, pigment ratio, *Rhodobacter sphaeroides*.

Nomenclature

LH	light-harvesting complexes	EM-CoA	ethylmalonyl-Coenzyme A
RC-LH	core complexes	Cars	carotenoids
Bchl	bacteriochlorophylls	NADPH	nicotinamide adenine dinucleotide phosphate

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