

Production of Carotenoids and Biosurfactants by Gordonia Alkanivorans Strain 1B Using Food Residues and Derivatives

Short introductive summary:

Through different bioprocesses, microorganisms, such as yeasts and bacteria, ferment and transform residue streams into high added value products, such as carotenoids and biosurfactants. Gordonia alkanivorans strain 1B is one of such bacteria, capable of consuming and transforming many types of residues. It is mostly known for its biodesulfurizing ability and it was recently described as a producer of both carotenoids and biosurfactants. In previous works, strain 1B has been cultivated on different sugar rich alternative carbon sources. However, it was shown, that in order to promote surfactant production, the microorganisms should be exposed to inducing factors, such as lipids and alcohols. This work focusses on valorisation of residues from the restaurant and food industry, and derivatives from their processing, by using them as carbon sources to grow the bacterium and produce carotenoids and surfactants.

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