

## **Production of bioflocculant by staphylococcus cohnii ssp. from Palm Oil Mill Effluent (POME)**

### **Abstract**

Staphylococcus cohnii ssp. was found to produce a bioflocculant with high flocculating activity for kaolin suspension. Using optimized culture conditions, a flocculating activity of 70.3 % at a bioflocculation concentration of 0.3 mg/L at pH 7 with Ca<sup>2+</sup> as the cation and 88.9 % in 1.2 mg/L of bioflocculant concentration for Al<sup>3+</sup> as the cation was obtained for bacteria that were incubated at temperature of 40 °C for 2-day incubation period. It was found to be effective for flocculation of a kaolin suspension over weakly acidic pH (6-8); divalent and trivalent (Ca<sup>2+</sup> and Al<sup>3+</sup>) enhanced the flocculating activity. This bioflocculant possesses a good flocculating activity, which can be promoted by the addition of trivalent and bivalent cations in kaolin suspension.

### **Keywords**

Bioflocculant; Flocculation; Kaolin; Palm oil mill effluent