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Purification of sodium channel blocker(s) produced in cells and culture broth of marine bacterial Vibrio sp. was performed by using two selected systems. The first system included activated charcoal adsorption and Bio-Gel P-2 chromatography while the second one included Bio-Gel P-2 chromatography and CM-Sephadex C-25 chromatography. It was found that both purification systems increased toxin purity but a small amount of toxin was lost in each step. However the similar toxin derivatives were obtained. Using combination of the two systems to purify the bacterial toxins from cells and culture broth, purity of 40.1 and 51.6 times were obtained from the toxins in cells and the culture broth respectively. The result from electrophoresis showed that both toxins from cells and culture broth contained GTX4. The specific toxicity of toxin from cells was 0.3847 MU/mg and toxin from culture broth was 0.6455 MU/mg. To compare the stability of purified toxins with the standard GTX4. The toxins could retain the activity at 100°C when solubilized in strong acid (pH 3) for 3-4 hours but completely lost when solubilized in strong base. Stability of the isolated toxins at 100°C in acid solution is the characteristic of paralytic shellfish toxins.

ภาควิชา จุลชีววิทยา ลายมือชื่อนิสิต วรรณิพา วิเวโก

สาขาวิชา จุลชีววิทยาทางอุตสาหกรรม ลายมือชื่ออาจารย์ที่ปรึกษา

ปีการศึกษา 2539 ลายมือชื่ออาจารย์ที่ปรึกษาร่วม