

by terminal-restriction fragment length polymorphism (T-RFLP). A microcosm of activated sludge was added with 1-chloro-4-nitrobenzene (1C4NB). When the sample was incubated for 1 week, the concentration of 1C4NB was reduced from 0.15 mM to 0.06 mM by indigenous bacteria. The 16S rRNA genes isolated from the bacteria in the sample was amplified by PCR and biotinylated primer. The terminal restriction fragments (T-RFs) visualized by polyacrylamide gel electrophoresis. Characteristic T-RF bands showed the 2 major and 70 minor bands in the sample without 1C4NB. On the other hand, the 8 major and 30 minor bands were appeared in the 1C4NB-amended activated sludge. In parallel, 7 strains were isolated from the activated sludge by minimal media contained 1C4NB as the sole carbon source. The 4 isolates of them revealed the 8 major T-RF bands. One of the dominant strains was closely related to genus *Acinetobacter* in the T-RF profiles.

B338

#### O-Serotypes and Antibiotics Susceptibility of *E. coli* Isolated from Marine Products.

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This study was practiced to investigate O-serotypes and antibiotics susceptibility to 179 isolates of *Escherichia coli* isolated from 2561 fishery samples sold in Garak agricultural and marine market from Jan to Sep, 2000. It showed 5.65% average *E. coli* isolation rates for the tested samples, highest on Aug(14.88%) but lowest on Jan(6.93%). Following the fishery groups, it showed in fish(10.51%), in mollusca(8.77%), in

crustacea(6.06%), in shellfish(4.02%) and in aquarium water(3.69%). Following the areas, in Je-Ju (13.04%) highest, but in Chung-Nam (3.93%) lowest. O158 were 28(17.3%) isolates, highest of the 162 strains which were determined among 179 *E. coli* isolates. Results in 12 kinds of antibiotics susceptibility test, every strains had antibiotics resistances at least one kind of antibiotics and of the 146 isolates had the multiple resistance at least two kinds.

B339

#### Isolation and identification of biofilm-forming bacteria on glasses exposed in sea water

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To isolate biofilm-forming bacteria from marine samples, glass surfaces were exposed to seawater in Dae-ho dike located in Chungcheong Province. For screening of biofilm-forming bacteria, all isolated strains were cultured for 1 day in 50 ml conical tube supplemented with filtered aged sea water and 1 glass slide. After washing with distilled water, the glass slides were stained with 0.3% methylene blue and observed with light microscope. 8 strains, which showed relatively high attached bacterial numbers, were selected for further characterization. By analysis of 16S r DNA sequences, 4 strains were identified as *Micrococcus luteus*. The others were identified as *Bacillus megaterium*, *B. thuringiensis*, *Staphylococcus saprophyticus* subsp. *saprophyticus*, and *Sulfitobacter pontiacus*, respectively. Among the isolates *B. megaterium* revealed as a potential producer of exopolysaccharide.