B318   Nucleotide Sequencing and Expression Analysis of a Gene Encoding
Moraxella sp. CK-1 Autolysin

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Moraxella sp. CK-1 autolysin gene has been cloned into *E. coli* XL1-Blue MRF'(Ohn
et al., 1997). The fragment sequence showed the presence of an open reading frame
which encodes a polypeptide of 273 amino acids with a molecular mass of 33,316 Da.
The deduced amino acid sequence showed the best homology(71%) with the *Thermus* sp.
serine proteinase. The gene was designated *magA*, for *Moraxella* sp. CK-1 autolysin
gene. A presumed ribosomal binding site and a rho-independent terminator were found.
The recombinant autolysin activity was measured by the ability to decrease the
optical density of a suspension of *Micrococcus luteus* cell wall at 37℃. No changes
in reducing groups appeared, whereas 190 nmol of free amino per mg was increased.
This shows that CK-1 autolysin has amidase or endopeptidase activity.

B319   Carbon source utilization profiles for microbial communities in
groundwater

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The metabolic diversity of bacterial communities with the basis of BIOLOG color
responses redox technology were investigated of ten wells in Seoul city. Direct
incubation of groundwater samples in BIOLOG plates containing 95 separate carbon
sources produced community-dependent patterns of sole-carbon-source utilization.
Color development value in a BIOLOG GN plate was obtained at 155 hour as an optimum
incubation time. The examination following each site showed the average well color
development followed a sigmoidal curve with incubation time. Dringking
groundwater(C1 and C2) samples had lower development of average well color than
waste groundwater samples(G1 ~ G8). Correspondence analysis and multidimensional
scaling analysis of color responses revealed distinctive patterns among the
groundwater samples. The separation of samples in multidimensional scaling spaces
can be related to differences in carbon source utilization. The results of
multidimensional scaling analyses five distinctive group; group 1(C1, C2, G3, G6,
and G7) , group 2(G2 and G5), group 3(G4), group 4(G8), group 5(G1).