

**On halophilic non-sporeforming anaerobic
Gram negative rods in sea fish and shell-
fishes**

— Haloanaerobium butyricum sp. nov., a Halophilic Anaerobic Bacteria —

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Summary

A new species of Halophilic anaerobic, rod-shaped, non-motile, Gram-negative, non-sporulating bacterium isolated from the sea fish and shellfishes. This organism proliferated optimally in approximately 2 ~ 3 % or ≥ 5 salt. It possessed single outerwall membranous layer.

We compared this strain of halophilic, rod isolated from the sea fish and shellfishes with DSM 2228 strain of Haloanaerobium praevalens (Type strain of genus Haloanaerobium). Acetic acid, butyric acid and propionic acid were the major glucose fermentation end products formed. Glucose, fructose, inositol and maltose were fermented.

The spectrophotometric method for determining G+C content and DNA homology were examined using DNA from H. praevalens DSM 2228 and H. butyricum JCM 9809. G+C content of H. praevalens DSM 2228 was 29.0 mol % and H. butyricum JCM 9809 was 30.0 mol %. DNA homology between H. praevalens DSM 2228 and H. butyricum JCM 9809 was only 10 %. A number of additional biochemical and physiological tests were performed.

Base on phenotypic and genotypic findings of our isolate, a new species, Haloanaerobium butyricum sp. nov., is proposed. The type strain is strain H. butyricum is strain JCM 9809.