

Transformation efficiency on *E. coli* in response to different bivalent salts

Authors:

Sahanawaz Alam SK and
Panigrahi AK.

Institution:

Fisheries and Aquaculture
Extension laboratory,
Department of Zoology,
University of Kalyani, Kaly-
ani, West Bengal. India.

Corresponding author:

Sahanawaz Alam Sk.

Email:

sahanawaz11@gmail.com

ABSTRACT:

Bacterial transformation is the process of up taking foreign DNA molecules by bacterial cells. Bacteria, which are able to up take such foreign DNA are called “competent” cell. Foreign DNA carrying antibiotic resistance gene can be expressed in the bacteria and transforming the bacteria from antibiotic sensitive to antibiotic resistance. Such transformed bacteria can easily be isolated. The efficiency of the transformation plays a critical role in recombinant DNA technology. Several methods have been developed to improve the transformation efficiency. In our work we have studied the transformation efficiency on strains of *E. coli* and in response to different bivalents salts at different concentrations. All the experiments revealed that transformation efficiency was highest on *E. coli* DH5 α strain in 50 mM CaCl₂ concentration. Comparing to the other *E. coli* and bivalents salts concentration, 50 mM CaCl₂, resulted in much faster growth of transformed bacteria. Thus, our results suggest that *E. coli* DH5 α strain and CaCl₂ can be used as an effective agent for the transformation technique.

Keywords:

Transformation efficiency, *E. coli*, Bivalent salt.