

## **Sensitivity of various Escherichia coli strains to 2,4,6-trinitrotoluene**

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### **Abstract**

The sensitivity of Escherichia coli strains K-12 and 055 to 2,4,6-trinitrotoluene (TNT) was found to correlate with the structural and functional properties of the outer lipoprotein membrane. The protective ability of the membrane of strain 055 is much lower than that of K-12. This is the cause of the greater sensitivity of 055 to the toxic action of TNT. High TNT concentrations (100-200 mg/l) suppressed the growth of 055, whereas K-12 grew at all TNT concentrations studied. Both strains adapted to high TNT concentrations by converting it by either nitroreduction or denitritation depending on concentration. The denitritation system of strain 055 started TNT degradation earlier than that of K-12. © 2005 MAIK "Nauka/Interperiodica".

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