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## Factors Influencing the Formation of Biofilms on Bacilli Model Systems

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### Abstract

© 2016, Springer Science+Business Media New York. The ability to form biofilms in natural isolate *Bacillus subtilis* 168 and mutants with deleted genes of regulatory proteins AbrB, DegU, CcpA, and SpoOA, constructed on its basis, was investigated to elucidate the pathways regulating biofilm formation in *B. subtilis*. The *B. subtilis* 168 wild-type forms a biofilms in the liquid medium with maximum at 48th hour of culture growth. pH optimum for the biofilm formation in the wild-type strain is in the range of 7.4–8.0. Temperature optimum was in the range of 22 to 45 °C. The level of biofilm formation for all regulatory mutants was lower than that in the wild-type for 40–50 %. Temperature and pH optima for the mutant strains are the same as for the wild-type strain—7.4–8 pH and temperature of 22–45 °C.

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### Keywords

*B. subtilis*, Biofilms, Ph optimum, Regulatory mutants, Temperature optimum