

32. Further studies of metabolic changes in strains of *Salmonella typhimurium* and *Yersinia pseudotuberculosis* after treatment with some detergents and lipid solvents

By: Velyanov, D.; Raducheva, T.; [Baykousheva, S.](#); Kusovski, V.

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Abstract

Incubation of *S. typhimurium* and *Y. pseudotuberculosis* in 30% petroleum ether at 37° inhibited respiration more than did 0.01-0.03% Na lauryl sulfate [151-21-3]. After a 72-h incubation in 10% glycerol [56-81-5] the respiration level returned to, or approached normal. Petroleum ether also inhibited dehydrogenase [9035-82-9] activity and glycolysis more than did Na lauryl sulfate. Incubation in glycerol also reversed this inhibition. Na lauryl sulfate completely and irreversibly inhibited phosphatase [9013-05-2] at pH 5.4 and 8.0. Petroleum ether inhibited phosphatase at pH 5.4 in *Y. pseudotuberculosis* and at pH 8.0 in *S. typhimurium*.

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Supplementary Terms

lauryl sulfate microorganism respiration; petroleum ether microorganism respiration; *Salmonella* respiration lipid detergent; *Yersinia* respiration lipid detergent

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