

The population incubated in the PPY medium increased 3, 4.7, 6 and 3 times during 3 h at 60, 65, 70 and 75 °C, respectively. The optimal density of a culture incubated in buffer was not changed. The course of protein turnover in the culture growing in the PPY indicated the presence of a small portion of short-lived proteins, the extent of which increased by increasing the temperature. The residual proteins were stable (Fig. 1, Table I). The size of the short-lived protein fraction increased slightly when the population was starved in a buffer. The residual proteins were degraded under this condition but the rate of their degradation was much lower than that of the short-lived fraction (Fig. 2, Table I). The degradation constant of the long-lived proteins reached its maximum value at 65 °C.

The results indicate that the kinetics of protein turnover in the extreme thermophile *T. flavus* is similar to the mesophilic *Escherichia coli* (Nath and Koch 1970; Pine 1973) and *Bacillus megaterium* (Chaloupka and Strnadová 1982) when these organisms grow in the range of their optimum temperatures.

REFERENCES

- BUBELA B., HOLDSWORTH E.S.: Amino acid uptake, protein and nucleic acid synthesis and turnover in *Bacillus stearothermophilus*. *Biochim.Biophys.Acta* **123**, 364 (1966).
- CHALOUPKA J., STRNADOVÁ M.: Kinetics of protein turnover in growing cells of *Bacillus megaterium*. *J.Gen.Microbiol.* **128**, 1003 (1982).
- EPSTEIN I., GROSSOWICZ N.: Intracellular protein breakdown in a thermophile. *J.Bacteriol.* **99**, 418 (1969).
- LOGINOVA L.G., EGOROVA L.A.: *New Forms of Thermophilic Bacteria*. (In Russian) Nauka Moscow 1977.
- NATH K., KOCH A.L.: Protein degradation in *Escherichia coli*. I. Measurement of rapidly and slowly decaying components. *J.Biol.Chem.* **245**, 2889 (1970).
- PINE M.J.: Regulation of intracellular proteolysis in *Escherichia coli*. *J.Bacteriol.* **115**, 107 (1973).

ERRATUM

Please replace the symbol $\ln\mu$ in Fig. 2 on p. 48, vol. **28** (1983) by the symbol $-\ln\mu$.