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# Enzymatic Properties of the Various Oxidoreductases on the Aerobic Respiratory Chain-linked NADH oxidase System of *Bacillus cereus*

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Enzymatic properties of the NADH:ubiquinone-1 oxidoreductase, the NADH:menadione oxidoreductase, and the NADH:ferricyanide oxidoreductase were examined from the Triton X-100 extract of Bacillus cereusmembranes. The purification of each oxidoreductase from the extract of membranes by Triton X-100 was achived approximately 4-, 8-, and 32-fold, respectively. Membranes prepared from B. cereus, grown aerobically on a complex medium, oxidized NADH exclusively, whereas deamino-NADH was little oxidized. The maximum activity of the FAD-dependent NADH:ubiquinone-1 oxidoreductasewas obtained at about pH 6.0 in the presence of 0.1 M NaCl. The maximum activity of the FAD-dependent NADH:menadione oxidoreductase was obtained at about pH 8.0 in the presence of 0.1 M NaCl. The activities of the NADH:ubiquinone-1 oxidoreductase and the NADH:menadione oxidoreductase were very resistant to the respiratory chain inhibitors such as rotenone and capsaicin, whereas the activities were sensitive to the 2-heptyl-4-hydroxyquinoline-*N*-oxide (HQNO). On the other hand, the maximum activity of the FAD-independent NADH: ferricyanide oxidoreductase was obtained at about pH 7.0 in the high concentrations of NaCl. The activity of the NADH:ferricyanide oxidoreductase was very resistant to HQNO and rotenone, whereas the activity was sensitive to capsaicin.