

LEGEND FOR FIGURE 9

EFFECT OF TRITON X-100 ON THE $P_i \rightleftharpoons$ HOH EXCHANGE AND ATPase REACTIONS

For the $P_i \rightleftharpoons$ HOH exchange measurements, sarcoplasmic reticulum vesicles (0.5 mg of protein) were incubated in 0.8 ml of $H^{18}OH$ (0.96 atom % excess ^{18}O) containing Triton X-100 at varying concentrations, 0.625 mM EGTA, 6.25 mM $MgCl_2$, 125 mM KCl and 125 mM Tris-HCl at pH 7.0, 15° , for 20 to 30 min, and then $P_i \rightleftharpoons$ HOH exchange reactions were initiated by adding 0.2 ml of 200 mM potassium phosphate at pH 7.0 to the incubation mixture at 15° . Reactions were quenched by adding 1 ml of 8% perchloric acid 40 min after the addition of P_i , and determinations of ^{18}O incorporated into P_i and calculations of the $P_i \rightleftharpoons$ HOH exchange rates were made as described under "Experimental Procedure." For the ATPase measurements, sarcoplasmic reticulum vesicles (0.5 mg of protein) were incubated in 0.775 ml of a medium containing Triton X-100 at varying concentrations, 0.645 mM EGTA, 6.45 mM $MgCl_2$, 129 mM KCl and 129 mM Tris-HCl at pH 7.0, 15° , for 30 to 50 min, and then 0.025 ml of 20 mM $CaCl_2$ or water alone was added. ATPase reactions were initiated by adding 0.2 ml of 181 μM $AT^{32}P$ to the incubation mixture at pH 7.0, 15° , 30 sec after addition of $CaCl_2$ or water. Reactions were quenched by adding 4 ml of 5% perchloric acid containing 5 mM ATP 10 sec after the addition of $AT^{32}P$. $^{32}P_i$ liberated and amounts of phosphorylated protein formed were measured as described under "Experimental Procedure." The rates of P_i -liberation and amounts of phosphorylated protein presented in the figure are corrected for the rate of P_i liberation and amount of ^{32}P incorporated into protein, respectively, in samples with added $CaCl_2$ at each concentration of Triton X-100. The abscissa indicates the concentration of Triton X-100 in the reaction medium after addition of P_i or $AT^{32}P$.