

# Ethanol metabolism by rat heart homogenates

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Supernatant of rat heart homogenates obtained by centrifugation at  $700 \times g$  for 10 min, incubated in the presence of ethanol (25 and 50 mM) and glucose (10 mM) were found to oxidize ethanol to acetaldehyde (AcH) in such a way that after 60 minutes of incubation around 5 to 8 nmole per mg of protein were recovered. The addition of glucose oxidase (5  $\mu$ g/ml), a known hydrogen peroxide generator system, to the incubation medium, significantly increased by about ten times the recovery of acetaldehyde. On the opposite, the presence of 3-amino-1,2,4-triazole (10 to 40 mM), a known catalase inhibitor, induced a concentration dependent reduction of the amount of AcH recovered during incubation even in presence of glucose oxidase. These findings support the idea that a catalase mediated oxidation of ethanol is acting in rat heart homogenates. AcH content of a medium in which rat heart homogenates were incubated in the presence of NAD (0.7 mM) decreased by 87% at 60 minutes. This effect was not ob