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Purification and properties of microbial aldehyde reductase

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Aldehyde reductases have been implicated in the metabolism of biogenic aldehydes, aldo sugars, prostaglandins and in drug metabolism. Aldehyde reductase was purified to electrophoretic homogeneity by using ammonium sulfate precipitation, DEAE-Sephacel ion-exchange chromatography and gel filtration chromatography. The purified enzyme exhibited a rather broad substrate specificity, and the kinetic constants for some substrates were determined. The optimum PH of the enzyme was 7.5. The enzyme activity was inhibited by nitrofurantoin, quercetin and dicumarol.