# Conversion of L-ribose from L-arabinose by Epimerization and Determination of the Epimerization Conditions by Ion Exchange Chromatography and HPLC

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The use of L-carbohydrates and their corresponding nucleosides in medicinal application has greatly increased. For example L-ribose has been much in demand as the starting material for curing hepatitis B. However, L-ribose dose not occur in nature. L-ribose was reported to be produced by epimerization. Bilik published a simple synthesis of L-ribose by molybdate-catalyzed epimerization of the readily available L-arabinose in 1973. The reaction now is known as the Bilik reaction.
In this study, the effects of the temperature, solvent, reaction time and molybdenum(VI) oxide amount on epimerization were examined by measuring the product concentration in sugar HPLC column. In addition, conversion mixture of L-ribose, L-arabinose, and MoO3 was separated by using ion exchange cloumn packed by Dowex ca resin.

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