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**Abstract:** With 2-keto-L-gulonic acid(2KLG) and methanol as raw materials 98% concentrated sulfuric acid as catalyst the methyl esterification reaction is occurred. Then with sodium carbonate as a transforming agent through a conversion reaction sodium carbonate is obtained. In this experiment the effects of reaction time reaction temperature and reactant ratio on conversion rate of sodium ascorbate were studied. The results showed that sodium carbonate as the reactant of lactonization reaction can effectively shorten the reaction time and improve reaction yield. By experiment under the optimum process conditions: the reaction temperature is 65 °C reaction time is 150 minutes and the molar ratio of 2 -keto-L-gu methyl to sodium carbonate is 1:0.6 the conversion rate reaches 98 % and the effect is better than with sodium bicarbonate as transforming ag © (2012) Trans Tech Publications Switzerland.

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