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**Production of L-lactic acid from soluble starch by  
*Lactococcus* sp. JA-1 isolated from Nuruk**

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Lactic acid has long been highlighted as an important commodity in the future as a monomer for the production of biodegradable polylactic acid(PLA). For lactic acid fermentation, It is also possible to use renewable resources, such as starch in fermentative production. On the other hand, amyolytic lactic acid bacteria are able to grow and produce lactic acid in media containing starch as the sole carbon source. Medium components for L-lactic acid production were optimized with a amyolytic strain of *Lactococcus* sp. JA-1, isolated from Nuruk. The optimal culture condition was 1.5% soluble starch as a carbon source, 3.5% tryptone as a nitrogen source, 0.1%  $K_2HPO_4$ , 0.04%  $MgSO_4 \cdot 7H_2O$ , 0.014%  $MnSO_4 \cdot 4H_2O$ , 0.004%  $FeSO_4 \cdot 7H_2O$  for 30hrs at 30°C, pH8. In fed batch culture, inoculum size of preculutre was 5% and concentrated soluble starch solution was added to medium to 15g/L. During fermentation, 10N NaOH was added to maintain the pH at 6.5 intermittently.