

The Isolation of Enterobacter Ludwigii Strain T976 from Nicotiana Tabacum L. Yunyan 97 and Its Application Study

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Abstract : The functional strain T976 for starch degradation was isolated from Nicotiana tabacum L. Yunyan 97 tobacco leaves, the ratio of starch hydrolysis transparent circle diameter to colony diameter of the strain was 4.14, 16S rDNA sequencing identified these strains as Enterobacter ludwigii. Then Enterobacter ludwigii T976 was fermented and spraying Yunyan 97 plant in vigorous growing stage. The results of once spraying fermentation broth of Enterobacter ludwigii T976 showed that starch content of upper leaves decreased slightly, from 3.77% to 3.1%, the reducing sugar content increased from 4.39% to 5.53%, and the total sugar content increased from 5.82% to 7.39%. The chemical content was also checked after three time spraying. The starch content of middle leaves decreased from 5.63% to 3.74%, while the content of total sugar and reducing sugar decreased slightly. And the starch content of upper leaves decreased from 7.62% to 4.78%, the total sugar and reducing sugar decreased slightly, and starch content of middle leaf decreased from 6.27% to 3.62%, the total sugar and reducing sugar did not change much, and other chemical components were in a suitable range.

Keywords : nicotiana tabacum, yunyan 97, leaf, starch, degradation, enterobacter ludwigii

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