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# Fast hydrolysis for determination of lipopeptides on solid surface

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Lipopeptide is a kind of important biosurfactant which has been employed in oil production as an ingredient in oil-flooding formula and have potential application in many other industry fields. Its determination is helpful in their studies and applications. However, its hydrolysis is a time-consuming process. A hydrolysis method of lipopeptide on solids surface was proposed to greatly shorten the analysis time. Firstly, the lipopeptide in organic solution was stained on the bottom of a glass vials and was hydrolysized in an atmosphere of HCl and water steam in a sealed Teflon (polytetrafluoroethylene)-lined reactor. Then the released main amino acid, leucine, was labeled with Dansyl Chloride and determined by HPLC equipped fluorescence detector. The results showed that the lipopeptide could be hydrolysized completely at 150°C in an atmosphere of 10mL concentrated HCl per atmosphere liter for 4 h. This hydrolysis method dramatically reduced the lipopeptide hydrolysis time to 4 h from 24 h and the post-treatment, needed in solution hydrolysis, was omitted. The target amino acid might not be decomposed under the hydrolysis condition. In addition, produced fatty acids after hydrolysis did not hinder the amino determination. The response of integrate area of labeled Leu in HPLC to the lipopeptide quantity was in good linear relationship. It indicated that the hydrolysis method for lipopeptide could be used to determine lipopeptide quantitatively in a shorter time.

## Biography

Shi-Zhong Yang received his PhD from East China University of Science and Technology. He is the full-time Professor and Supervisor of PhD and MD candidates. He has published more than 40 papers in peer review journals.

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