

Determination of Diallyl Disulfide in Garlic by Reversed-Phase High Performance Liquid Chromatography

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The properties of garlic (*Allium sativum* L.) are attributed to organosulfur compounds. Here, a newly developed analytical technique with a rapid and simple sample preparation to determine diallyl disulfide (DADS) in garlic is reported. All garlic samples were simply extracted with different solutions (methanol, benzene or tetrahydrofuran) and prepared for analysis. From the results, the methanol was optimized as the extraction solvent. The mobile phase was composed of methanol and water, and gradient elution mode was applied. It is established that 0.61 mg of DADS per g garlic powder can be extracted with methanol. This work offers some advantages over the currently accepted techniques and would be useful for chemical and biological studies of garlic and its products.