

Title Studies on degradation and final residue of the bionic fungicide 2-allyphenol in strawberry fruit by HPLC method

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Abstract

The degradation and residue of bionic fungicide 2-allyphenol in the strawberry fruit was studied by means of a high-performance liquid chromatography (HPLC) method. The results showed that residue of 2-allyphenol were extracted from strawberry using an extraction with acetone, purification by liquid-liquid partition, concentrating to a small volume and then determination by HPLC with ultraviolet detection at 273 nm. The equation of the calibration curves was $Y=1004.9X-4439.5$, ($R^2=0.997$). The minimum detectable amount of 2-allyphenol was 4.2 ng, the minimum detectable concentration of 2-allyphenol in the sample of strawberry was 0.02 mg/kg. The average recoveries and coefficient of variation of the method were 79.41%-83.52% and 1.19%-2.25%, respectively. The degradation and final residue in strawberry were determined with the method described above. The results indicated that the half-life of 2-allyphenol in strawberry was 4.4 days and 2-allyphenol in strawberry fruit was degraded more than 90% before harvesting.