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## **Photochemical Isomerization of Piperine, a Pungent Pepper**

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A separation method for piperine and its isomers (chavicine, isochavicine) from a photoirradiated mixture of piperine, in solution and in supercritical performance liquid chromatography (HPLC), was investigated to clarify the relationship between the disappearance of the pungency in older, ground pepper and the photoisomerization of piperine. Piperine and its isomers were separated on an OA-2000 column with hexane/dichloromethane/ethanol (48/16/0.8

Their structural elucidation was carried out using nuclear magnetic and HPLC atmospheric pressure chemical ionization mass spectro. Although the increment in the three isomers in commercial ground sunlight was observed by monitoring the MH<sup>+</sup> ion on LC/APCIMS varied very little. It is questionable whether the disappearance of the ground pepper is derived from the formation of tasteless isomers by in piperine.

**Keywords:** [pepper](#), [Piper nigrum L.](#), [piperine](#), [photochemical iso](#)  
[NMR](#)

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