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### The Study of Genotoxicity and Antimutagenicity of Cinnamaldehyde (III) : Microgel Electrophoresis (Comet Assay) in Chinese Hamster Lung Fibroblast

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Cinnamaldehyde is known as a inducer of chromosome aberrations *in vitro* mammalian cell system. In this respect, we performed single cell gel electrophoresis(SCGE) to determine the ability of DNA strand breakage of in cell level. Microgel electrophoresis is useful, rapid, simple, visual, and sensitive technique for measuring DNA strand breakage and repair mechanisms in mammalian cells. The range of concentration of cinnamaldehyde was determined 16~125  $\mu\text{g}/\text{ml}$  which revealed above 85% viability. We analyzed the results by using the special software of image analyzer for this comet assay (Komet 3.0). By using this image analyzer software , we can get the result as the tail moment ((mean of tail length - mean of head length) x tail% DNA /100). A significant increase in DNA migration was observed at the concentrations applied of cinnamaldehyde both in the absence and presence of S9 mixture. This result suggests that cinnamaldehyde induces DNA strand breakage in the concentration ranges used in this experment.

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