## Cytotoxicity of α-terpineol in HeLa cell line and its effects to apoptosis and cell cycle

Title	Cytotoxicity of α-terpineol in HeLa cell line and its effects to apoptosis and cell cycle
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Abstract	$\tilde{A}\check{Z}\hat{A}\pm$ -Terpineol is a natural compound of terpenoid alcohols class. However, it can be synthesizedfrom $\tilde{A}\check{Z}\hat{A}\pm$ -pinene of turpentin content. $\tilde{A}\check{Z}\hat{A}\pm$ -Terpineol has been reported as potential anticancer agentdue to its activity on inhibition of cells growth and induction of tumor cell death. However, itsanticancer activity in HeLa cervical cancer cells line has never been studied, yet. The aim of thisstudy was to evaluate the cytotoxicity of $\tilde{A}\check{Z}\hat{A}\pm$ -terpineol and its effects to apoptosis and cell cycle. This was a quasi-experimental study with post-test only with non-equivalent control groupdesign. Cytotoxicity of $\tilde{A}f\hat{A}_i$ -terpineol was evaluated using MTT cell viability assay. The effect of $\tilde{A}\check{Z}\hat{A}\pm$ -terpineol on cell apoptotis was tested using acridine orange- ethidium bromide staining method, whereas its effect on cell cycle was evaluated by flowcytometry method. The results showedthat $\tilde{A}\check{Z}\hat{A}\pm$ -terpineol had cytotoxicity against HeLa cell with an IC50 value about 12.46 $\tilde{A}\check{Z}\hat{A}_{4}$ g/mL. Furthermore, $\tilde{A}\check{Z}\hat{A}\pm$ -terpineol induced the HeLa with an IC50 value about 13.12 $\tilde{A}\check{Z}\hat{A}_{4}$ g/mL. Cell accumulationat G1 phase during cell cycle after incubation with $\tilde{A}\check{Z}\hat{A}\pm$ -terpineol (52.78)was observed. In conclusion, $\tilde{A}\check{Z}\hat{A}\pm$ -terpineol is potential as an anticancer due to its ability to induce cell apoptosis and to inhibitthe cell cycle at G1 phase.
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