THE ACTIVE FRACTION FROM Nigella sativa AND ITS ACTIVITY AGAINST T47D CELL LINE

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Abstract	Breast cancer is one of the main causes of death in women. Cancer treatment with surgery, chemotherapy, and radiology often cause undesirable side effects. Therefore, alternative cancer treatment by using plants as traditional medicine was expected to reduce side effects. Nigella sativa is one of the plants used as anticancer empirically. This study conducted to examine the cytotoxic activity of Nigella sativa seeds and identify its components on T47D breast cancer cells. Petroleum ether, chloroform, ethyl acetate, and ethanol were used to extract N. sativa seeds. The extracts were tested their cytotoxic activity on T47D cell line using MTT method. The active compound was separated using column chromatography. Cytotoxic test on T47D cell line was perform for extracts of each separation stage. Data were analyzed by probit analysis to obtain IC50 values. Components identification was performed using GC-MS analysis. The results showed that chloroform extract has cytotoxic activity better than other extracts with IC50 of 124.206 Ã‚µg/mL. The third fraction has cytotoxic activity better than other fractions with IC50 of 68.568 Ã‚µg/mL. The GC-MS analysis showed that in the third fraction of the chloroform extract contain linoleat acid, the major compound and tryptamine.
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