

**ANTICANCER TEST OF N-HEXAN SORGUM LEAF (*Sorghum bicolor* L.)  
EXTRACT USING *MTT*-ASSAY METHOD ON T47D CELLS**

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**ABSTRACT**

Cancer is a group of cells that grows continuously in the tissues. One type of cancer that affects many women is breast cancer. Breast cancer is characterized by a lump in the breast that experiences uncontrolled cell development. Sorghum plants (*Sorghum bicolor* L.) are identified as having steroid and alkaloid contents which are thought to inhibit the development of cancer cells. The purpose of this study was to determine the content of chemical compounds contained in sorghum (*Sorghum bicolor* L.) leaf extracts and determine the inhibitory activity of sorghum *n*-hexane extract (*Sorghum bicolor* L.) against breast cancer by *MTT-Assay* method. The research was begun by taking sorghum leaves, washing, sorting, drying with cabinet dryer and extraction. Extraction was carried out applying *n*-hexane solvent using maceration method that was assisted with sonicator which was then followed by phytochemical screening tests to determine the compounds contained in sorghum leaves. The activity of *n*-hexane extract on breast cancer cells was carried out by *MTT-Assay* method and data analysis using statistical tests. Phytochemical screening test results of sorghum leaf extract showed that *n*-hexane extract contained alkaloids and steroids. IC<sub>50</sub> ± SD values obtained from the anticancer test on T47D cells were 1374.437 µg / mL ± 121.299 µg / mL while in Vero cells 1717.94 ± 300.942 µg / mL were obtained. The IC<sub>50</sub> ± SD value indicates that the extract was categorized as not having breast anticancer activity.

Keywords: Breast cancer, sorghum, *Sorghum bicolor* L., *MTT Assay*