

**ABSTRACT**

**Antibacterial activity of instant green tea product against *Escherichia coli* in vitro**

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Infection is the major cause of health problems in Indonesia, one of the reasons is bacteria *Escherichia coli*. In the recent time, instant green tea product (IGTP) was mostly used by the public. Green tea contains high level of Epigallocatechin gallate (EGCG) that used as antibacterial. The purpose of this study is to find the minimal inhibitory concentration (MIC) of IGTP is very effective in inhibiting the growth of *Escherichia coli* ATCC 29523.

The sample of this experiment is green tea product from PT. Agaricus Sido Makmur Sentosa (PITH) and green tea product from PTPN XII Lawang (PTH). The experiment made with dilution method, it used 8 different concentration of each and one of chloramphenicol as positive control. For detection of antibacterial activity, a well diffusion agar test was used.

Antibacterial activity is shown in 6250 ppm for PITH and for PTH 15062,5 ppm. Those two concentration is the most effective concentration in each IGTP with the averaged diameter inhibition zone is 3 mm. There is significant differential between PITH and PTH ( $p < 0.01$ ), and it can be said that PITH is twice more effective than PTH because it just need 1.25 g / 200 ml of PITH.

Keywords : Antibacterial activity, Instant green tea product, *Escherichia coli*