Research Methodology in Chemistry

Edited by
Fiona N.-F. How, Ph.D

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CHAPTER – 5

BIOLOGICAL ACTIVITY OF NATURAL PRODUCTS

Deny Susanti

Introduction

The exploitation of the bioactivity of natural product mixture can be obtained by using the well-designed of bioassay. The detection of bioactive metabolites is the starting point for a strategic approach in the search for potentially useful compounds. Simple and inexpensive assays suitable for the rapid screening of extracts in the typical laboratory have been developed.

There are a number of criteria to be met for a useful screening bioassay (basic or primary screen). It must be rapid, convenient, reliable, inexpensive, sensitive, require little material, and be able to identify a broad spectrum of activities.

The most important thing in science based research are the ability to replicate one's findings. Replication is a key means for being able to show that results are not a fluke or due to an error caused by the initial scientist. The more researchers who concern to replicate the same results, the more accurate the researchers conclusions are. Therefore, replication in this test is important to get the accurate results.

Antimicrobial Activity

The scientists have developed several methods to measure the efficacy of antimicrobial agents. These include diffusion susceptibility test, the minimum inhibitory concentration and the minimum bactericidal/fungicidal concentration test.

Diffusion susceptibility test