THE ANTIMICROBIAL EFFECT OF +OXIVAREAAGAINST METHICILLIN RESISTENCE STAPHYLOCOCCUS AUREUS

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Abstract - World Health Organization recently published a list of bacteria which urgently needed new medicine;one of the bacteria is Methicillin Resistance Staphylococcus aureus (MRSA). MRSA is in group which highly needed a new alternative potential medicine. MRSA have progressively increased their resistance to antimicrobial drug, MRSA is listed as Multi Drug Resistance Organism (MDRO) and Health Care Associated Infections (HAIs) bacteria, HAIs is still a major problem in both developed or developing countries around the world include many countries in Asia. The aim of this study was to find an alternative potential drug which is effectively killing MRSA. +Oxivarea is a substance combine of grape seed oil, olive oil, lemon oil, and nutmeg oil which has been through ozonizedprocesss. This in vitro experimental research used broth dilution test methodand Trypticase Soy Broth (TSB) as bacteria growing medium. The purpose of using this method isto observe the killing effect of +Oxivarea, determine the minimum ozone time. Gas Chromatography test was performed to determine the substances of +Oxivarea. The experimental showed+Oxivarea with 4 hours ozonation process and in 100% concentration could totaly eliminate MRSA. The antimicrobial effect of the +Oxivarea was formed because of biochemical compound of +Oxivarea such as polyphenols, methyl palmitate, methyl oleat, methyl stearate. Our findings showed that +Oxivarea could kill MRSA and this knowledge is expected to be used for the beginning manufacturer of anti MDRO drug +Oxivarea.

Keywords - MRSA, HAIs, +Oxivarea, MDRO