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PREFACE

AssalamualaikumWr. Wb.

The International Conference, with the main theme "Interprofessional Collaboration On Global Challenge Of Current and Future Infectious Diseases" (IC-GCID 2016), conducted in 20\textsuperscript{th}-21\textsuperscript{st} May 2016, is the first International Events in 2016 organized by Health Polytechnic Makassar in Makassar, Indonesia. It is a great honor to have all IC-GCID delegates and speakers, Infectious disease experts, professional lectures and practitioners, as well as decision makers both the Head of the Board of PPSDM from the Ministry of Health Republic of Indonesia and the Mayor of Makassar City.

The objective of the conference is to collect the knowledge of the latest researches and findings from the health professional experts from various field of expertise to share each others both from Indonesia and few other countries, and to establish our progress of knowledge and efforts in facing global challenge of infectious diseases and also to build interprofessional collaboration among professional health experts to look for a new paradigm on infectious diseases in terms of preventive, promotive, curative, and rehabilitative services to provide diverse information from the viewpoint of various professions.

The topics in the international conference are listed as follows:
- Demographic and behavioral
- Mobility, migration, and globalization
- Modern medical practice
- Modern food technology
- Politics, ecology, and environment
- Urbanization and megacities
- Emerging diseases

We received many abstracts from in state and abroad that provide information about various results research that summarized in the proceedings.

Furthermore we would like to thank to all those who have contributed. We hope this proceeding can be useful to support the development of science particularly with respect to the quality of human resource development and research in the future.

WassalamualaikumWr. Wb

H. Muhammad Nur, S.Kep, S.SiT, M.Kes
Chairman Committee IC-GCID 2016
WELCOME MESSAGE FROM
DIRECTOR OF HEALTH POLYTECHNIC MAKASSAR

Assalamualaikum Wr. Wb.

All praise and gratitude should we pray to Allah SWT, because over abundance of grace and His mercy so The 1st International Conference Proceeding with theme “Interprofessional Collaboration On Global Challenge Of Current and Future Infectious Diseases” (IC-GCID 2016) can be completed in accordance with a predetermined time.

This proceeding is a collection of abstracts as a research results, especially in the face of global challenges infectious disease in terms of preventive, promotive, curative and rehabilitative services to provide diverse information from the viewpoint of various professions and adding insight to the readers on that problem.

Furthermore, we express our thanks and appreciation to all those who have helped in the publication of proceeding among others to the reviewer, writer, editor, co-editor, Poltekkes Makassar’s research units and especially to the committee which has been coordinating the preparation of proceeding to be distributed.

Finally, we apologize for any shortcomings and we received input for the preparation of proceeding improvement in future activities. Hopefully this proceeding can provide benefits and receive a blessing from Allah SWT. Amen.

Wassalamualaikum Salam Wr. Wb

Dr. H. Ashari Rasjid, SKM., MS
Director of Health Polytechnic Makassar
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BACKGROUND - The use of refrigerant on a variety of cooling machine today, both refrigerant synthesis containing CFC (chlorofluorocarbon) and alternative refrigerant to hydrocarbon-based may potentially cause global environmental problems namely the effects of ozone depletion, the greenhouse effect / global warming, also the use of energy is relatively large. To solve the problem, should be considered an alternative air cooler that utilizes a liquid antifreeze as an environmentally friendly and thermoelectric refrigerant as a source of cold with the fewer number of components.

OBJECTIVE - The aims of this research to get the performance of the air cooling alternatives that meet the standards of indoor air temperature for human comfort that move therein. For long-term goals, this study will address the problems of global environment as mentioned above and can provide solutions for the availability of refrigeration in general to remote areas difficult to reach commercial power, because the cooling machine can be operated with a source of direct current electricity which can be supplied from solar cells.

METHODS - The method used to conduct the research performance of the air cooling alternative to modifying the conventional air conditioning machine. The use of conventional refrigerant replaced by antifreeze fluid in this case the water-salt (brine) and glycol. Utilize the cooling source of the thermoelectric cold side, the use of the compressor is replaced with a circulating pump. Condenser in a conventional cooling machine will not be used again in this system. Evaporator modified into a ventilator that is cooled by circulating antifreeze fluid that has been cooled by four pieces of thermoelectric (TEC 12706).

RESULTS - During the cooling cycle, no change of phase refrigerant so that the circulation of the refrigerant only done by the pump. Engine performance test these alternative refrigerants varying: a mixture of water and salt to obtain the water-salt refrigerant appropriate and the number of thermoelectric chips as a source of cool to get the cooling effect of the most effective and efficient. On the use of antifreeze liquid mixture of NaCl + H2O average temperatures as low as 6,1°C refrigerant obtained an average indoor temperature low of 12,2°C with the highest COP value of 2.34 and the lowest was 0.70, while the use of antifreeze fluid mixture glycol + H2O average temperatures as low as 3,3°C refrigerant obtained an average indoor temperature low of 8,9°C with the highest COP value of 2.10 and the lowest was 0.57. The Coefficient of Performance value (COP), which trended downward is caused by the temperature of the room to the stable state.