

North South University



Department of Electrical and Computer Engineering (ECE)

Spring 2020

Senior Design Project Report EEE/ETE – 499B

**Temperature Controlled Portable Refrigerator for Sample/Vaccine
Transportation**

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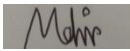
Supervisor

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Agreement Form

We take great pleasure in submitting our Senior Design Project report on “Temperature Controlled Portable Refrigerator for Sample/Vaccine Transportations”. This report is prepared as a requirement of the Senior Design Project EEE – 499 which is a two semester-long senior design course. This course involves multidisciplinary teams of students who build and test custom designed systems, components or engineering processes. We would like to request you to accept this report as partial fulfillment of the Bachelor of Science Degree under the Electrical and Computer Engineering Department of North South University.

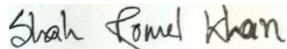
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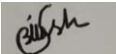
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Acknowledgement

Our entire team would like to receive this opportunity to express our heartiest appreciation and gratitude towards our supervisor Dr. Dihan Md. Nuruddin Hasan for giving us the opportunity to work on this design on “Temperature Controlled Portable Refrigerator for Sample/Vaccine Transportations”. We believe it enabled us to get a practical life experience about the implementation of engineering theories, tools, and materials. We hope the information and experiences we are earning through all our project work in these last few months will help us enormously in the near future.

Title

Temperature Controlled Portable Refrigerator for Sample/Vaccine Transportations.

Abstract

Vaccines, medicines and samples have been an essential element in our world in order to stay healthy. As the days are passing by, there have been great technological advancements in the medical sector. In this modern world, it is very unfortunate to know that some remote places do not have access to vaccines or medicines since they do not have electricity and cannot store them in a cool environment. This project work will ensure the vaccines or medicines to reach those areas without any hassle. This system will keep the vaccines or medicines in their desired temperature and will also ensure the safety of the products to be transported using GPS and allow remote monitoring with the use of IOT cloud data logger. Many places have been trying to deliver these essentials using ice boxes but it is not very efficient and in many cases results in damaging the products. The system is developed in such a ways that it will decrease the hassle of cooling ice blocks and also ensure safety of the essentials and allow strict monitoring.