

## FABRICATION AND TESTING OF THERMOELECTRIC REFRIGERATION SYSTEM

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### ABSTRACT

Advancement in technological field led to the most valuable invention i.e refrigeration and air conditioning system but its prolonged usage resulted in environmental problems that were catastrophic. Refrigerant used in the system such as CFC's, HFC's. HFC's caused serious environmental issues and giving rise to global warming. These refrigerants deplete the ozone layer that strains the ultraviolet rays coming to the earth's surface and there effect is for a longer period of time as these refrigerants stay in the atmosphere for as long as 18 years. A single molecule of HFC can destroy thousands of O<sub>3</sub> molecules and that's why it has created a threat for the not only to maintain earth eco system stable but also to existence of earth. Even the percentage of HFCs are emitted into the atmosphere compared to CO<sub>2</sub> is negligible but its global warming effect is few thousand times of CO<sub>2</sub>. The capacity of HFCs to increase in earth temperature 10% is contributed by HFC's only.

In recent years people are more inclined towards the usage of a compact and efficient refrigeration system that live upto their personal and environmental expectations. These led to the discovery and usage of thermo-electric cooling and heating system that can be a boon to the mankind TEC's emulates the performance of conventional refrigeration system in a considerable low cost.

**KEYWORDS:** Peltier Effect, Peltier Device, Radiator, Thermo-Electric Cooling