

## 可攜式電子加熱溫控保溫盒之研製

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### 摘要

本文提出使用電子式控制電路應用於保溫盒之研製。與一般傳統式保溫盒之比較，傳統式皆以保溫為主要功能。一旦時間過久，其保溫效果仍然相當有限，無法達到長時間保溫。因此，我們利用 89S51 單晶片搭配許多精密電子元件，設計出一個可以加熱且具有定時保溫等功能的電路；並將其結合到保溫盒。此外；攜帶性為本創作另一項特色，為了供應足夠的電源給電路，又避免造成使用者更換電池上的負擔。我們採用充電電池供電，可反覆使用，達到環保的效果。

關鍵字：保溫盒;電子式控制電路;89S51 單晶片;充電電池;單晶片

# **A Novel Temperature Controller for Thermal Insulating Container**

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## **Abstract**

In this paper, an electronic control circuit is used in the thermal insulating container. To make a comparison with the conventional thermal insulating container, the latter focus on heat preservation as main function. Once time is longer, the heat preservation capability is limited to a few hours. In this paper, an 89S51s chip is used for precise thermal control. The designed electronic circuit can heat faster than the conventional one. Besides, the circuit can be embedded in the thermal insulating container. Moreover, in order to avoid the complexity of changing battery, a rechargeable battery is used to offer electrical power which attains environmental protection.

Key words : Thermal insulating container;Electronic control circuit;  
89S51 single chip;Rechargeable battery;Single chip