THERMOBASE - A new Medical Device to Aid the Control and Temperature of Liquid Meals for Post Bariatric Surgery Patients

Abstract

Bariatric surgery is a surgical procedure in order to promote the isolation of the stomach and thereby reduce the health risks arising from obesity. The meal in the first month after surgery, which may extend for a longer period according to experts, is based only on a liquid diet. During this period of rehabilitation, the patient ingests 20 ml of fluid every 10 minutes, and should be followed strictly for proper hydration throughout the day. Liquids like soups, juices and waters, are part of diet and needing to be stored in a container such as a bottle, which generally can do not store them in the correct temperature to facilitate the intake for nutritional education caused by diet on postoperative of bariatric surgery throughout the day. This document aims to present a project to improve the quality of life of people undergoing surgery to reduce the stomach, through the development of a device called adjustable THERMOBASE, wherein the patient is able to control the temperature of the heating fluid or cooling the machine contact surface, which should be in contact with a container containing the liquid to be consumed according to the model proposed by nutritionists that to monitor post-operative diet. Thus, by means of physical property of thermal conduction, through the Peltier sensor, the soup can be heated to the boiling point or fresh juice to its freezing point, as examples of the extreme
draft potential. The THERMOBASE tells you how many drinks were consumed during the day providing valuable nutritional information for nutrition professionals who follow the patient postoperatively, and audible, visual or vibration alarm, indicating the next meal time deadline.

References


Index Terms

Computer Science

Circuit And Systems

Keywords

Peltier sensor  bariatric surgery  obesity  quality of life.