THERMOSENSITIVE TAG FOR FROZEN/CHILLED GOODS

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The organoleptic characteristics and the integrity, necessary for the healthy and enjoyable consumption of low temperature foods, depend essentially on them being stored and maintained in environments in accordance with appropriate temperature levels indicated for each product. Data from the Epidemiological Vigilance Center of Curitiba indicates that, just in the year of 2013 approximately 5.000 cases of diseases linked to improper storage and preparation of chilled or frozen goods were documented, most scenarios being related to products being subject to improper temperature standards. Considering the health risks consumers become susceptible to when ingesting these improperly stored products, this project aims to devise a method of observable criteria and consequently minimize the risks of illnesses related to microorganisms harmful to our healths. This method can reduce the occurrences of food poisoning by means of a visual mark, indicating the product has been properly stored and handled prior to being acquired. And so a thermosensitive tag of colloidal consistency was developed, composed of water, ice-cream emulsifier, neutral base, food colouring and in some cases grain alcohol. The standards for the quantity of each substance were defined by studying the results of approximately 50 tests, each with different concentrations of each compound and each tested in different temperatures. In accordance to those standards, the tag could significantly reduce health dangers related to unsuitable storage conditions, for it would serve as a testament for the customer, indicating the product was kept suitably chilled ever since it was first frozen at the factory floor and wasn't subject to elevated temperatures in its logistical course that could make it more susceptible to contamination.

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