RICE CRC

FINAL RESEARCH REPORT

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Title of Project :	Texture analysis of rice cakes
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Texture Analysis of Rice Cakes

SunRice Project: X0015 Cookie Monster
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SUMMARY

Snack foods represent a dynamic segment of the food industry, as new products are continually being developed to satisfy changes in consumer trends.
This highly competitive market features many products that have short life cycles, and a requirement for rapid development that puts pressure on aspects of the product development process such as shelf life studies, flavour profile development etc.

Knowing a products limitations with respect to shelf life and storage is of critical importance before launching. In dry cereal foods, like rice cakes, breakfast cereals and extruded products, knowing the effects of storage on texture is of importance to ensure a high quality product reaches the consumer.

Currently SunRice, like many other food companies rely on various types of sensory panels to evaluate the quality of their products. Compared with sensory panels, which are costly and time consuming, the development of an instrumental method to measure cake quality could ultimately save time, reduce costs and provide more consistent objective results. However the development of such methods is not an easy task.
Several attempts to develop an objective method have failed because it is difficult for machines to imitate the complex interaction and changes of forces during chewing and biting, let alone the impact of other sensory stimulus that all effect how the texture of a product is perceived. Through this project, methods using the Stable Micro Systems TA-XT2i Texture Analyser have been developed to either part-mimic aspects of the physiological experience of biting and chewing, and/or developed to measure physical differences that show a high degree of discrimination between rice cakes of different "sensory texture measurements". This work has assisted the industry to understand texture change during the aging of rice cakes and has set the course for further improvements to objective texture assessment in rice cakes.