



Process for Producing Fresh Long-Life Rice-Based Noodles

SP Singapore Polytechnic

Technology Licensing Opportunity

Technology Overview

Fresh rice noodles face a critical market challenge due to their high moisture content, which limits shelf life to merely a few days at ambient temperature. Current commercial solutions attempt to address this through pasteurisation to achieve 3-month shelf life, but this process creates significant quality compromises. Pasteurised rice noodles suffer from starch leeching and retrogradation, resulting in brittle, hard textures that break easily and stick together despite oil application. Additionally, the desirable bright white appearance is diminished, compromising consumer appeal.

This innovative technology revolutionises rice noodle preservation by achieving an extended shelf life of at least 6 months at ambient temperature without any chemical preservatives, whilst maintaining superior quality characteristics. The technology slows down the colour and texture deterioration over its shelf life. It employs a simple soaking solution process that can easily substitute traditional oiling methods in existing factory equipment, making it highly suitable for scale-up and seamless integration into current production lines without significant infrastructure changes.

Potential Applications

For keeping various steamed rice noodles fresh that are not in the dried form such as:

- Kway Teow
- Hor Fun
- Kway Chap
- Bee Hoon
- Chee Cheong Fun

Commercialization / R&D Opportunities

- ✓ Ready for commercialization
- ✓ Looking collaborators for further development / to develop new applications
- ✓ Available for licensing
- ✓ Accepting business plans from interested parties

Intellectual Property -

- Patent pending

Technology Features & Specifications

- At least 6 months of shelf life at ambient temperature of 25 degree Celsius
- Bright white translucent appearance
- Elastic texture with minimal breakage
- Healthier rice noodle due to less/no oil added.

Unique Value Proposition

- Rice noodles hold a significant place in Singapore culinary heritage. Convenience-driven trends are boosting demand for pre-packaged rice noodle products. The market's growth is also influenced by the increasing adoption of Southeast Asian cuisine in global food trends.
- The prepared flour mixes and doughs market in Singapore experienced a surge in demand during the COVID-19 pandemic. With more people cooking and baking at home, the convenience of ready-made flour mixes and doughs became highly appealing. Consumers sought out options that required minimal effort and provided consistent results.
- The Rice Noodle Market was valued at USD 5.58 billion in 2023. Over the forecast period of 2024-2030, it is projected to reach USD 14.14 billion by 2030, growing at a CAGR of 14.2%.

Disclaimer

Although due care and attention have been taken to ensure that the preparation of this material is as accurate as possible, the contents of this brochure are provided for information purposes only. Neither the Singapore Polytechnic nor the inventors offer any warranty, written express or implied, as to the accuracy of the said contents. Applicants are advised to undertake independent evaluation of the technology.