



Enteric Fast Melt Tablet Formulation

Scientists at Aston University have developed a novel oral disintegrating tablet formulation that can be used for the delivery of enteric pharmaceuticals. This novel formulation allows the enteric ingredients to be suspended in a fast melt tablet without any reduction in performance. The technology may also be used for incorporating very bitter active ingredients into fast melt formulations. This new technology is likely to have wide application in the prescription and OTC drug markets, and offer opportunities for the life cycle management of existing drugs.

Highlights

- Novel oral dispersible tablet formulation
- Effective suspension of enteric active ingredients
- No heat treatment required – suitable for heat sensitive drugs
- Improved tablet performance
- Applicability across a wide range of drugs and also suitable for use with bitter active compounds
- GRAS ingredients

Background

Pill-swallowing difficulty affects a significant proportion of people, and in particular affects geriatric and paediatric populations. In order to address this problem, orally disintegrating tablets (ODTs) have been developed, which are typically solid unit dosage forms that

disintegrate or dissolve in the mouth without chewing or the necessity to add water. ODTs are also known as fast-dissolving or fast-melt tablets.

ODTs have many advantages over both solid and liquid dosage forms. Such tablets remain solid until administration. This aids the stability of the pharmaceutically active agent, the dose accuracy, and storage of the tablets. Upon contact of the tablet with the oral cavity, the tablets transform into a liquid within a short time period (typically less than 30 seconds after administration) which allows the pharmaceutically active agent to be easily swallowed.

It has typically not been possible to include enteric active ingredients in fast melt formulations due to the need for them to pass through the stomach without interaction with stomach acid. Similarly inclusion of bitter ingredients has proved difficult from a patient acceptability perspective.

The Technology

Scientists at Aston have developed an improved ODT formulation with significant advantages over existing systems. The formulation allows for an even suspension of tiny coated pellets of the enteric or bitter ingredient which retain their integrity throughout the manufacturing process. Significantly, tablets produced using the Aston formula have a reduced manufacturing time, are hard and do not easily fragment making them easier to store and transport, but still have a melt time of less than 30 seconds. All ingredients are generally regarded as safe.

Intellectual Property Protection

This technology is the subject of a UK priority patent application:

<i>Title</i>	<i>Pending Applications</i>	<i>Priority Claimed</i>	<i>Our Ref</i>
Enteric Fast Melt Tablet	GB 1005976.4	April 9, 2010	PAT-2009-041

Further Information

Further information can be made available and commercial discussions commenced on entering into a non-disclosure agreement.

Contact Details

Business Partnership Unit
Aston University
Aston Triangle
Birmingham B4 7ET
United Kingdom

Tel: +44 (0)121 204 4242
Email: bpu@aston.ac.uk
www.astoninventions.com