

## TECH OFFER

### Nano Delivery Technology That Improves Consistency And Longevity Of Fragrance Sprays



#### KEY INFORMATION

TECHNOLOGY CATEGORY:

**Sustainability** - Sustainable Living

**Chemicals** - Additives

**Chemicals** - Flavours & Fragrances

**Green Building** - Indoor Environment Quality

**Materials** - Nano Materials

TECHNOLOGY READINESS LEVEL (TRL): **TRL8**

COUNTRY: **SINGAPORE**

ID NUMBER: **TO175044**

#### OVERVIEW

Fragrance and deodorising sprays for home care, fabric care and pet care applications often suffer from inconsistent and shortlived performance. This Nano Delivery Technology encapsulates fragrances, essential oils and other odourous compounds into nano sized biodegradable capsules that can anchor themselves efficiently to fibres and hairs, while regulating the release of the encapsulated compounds over prolonged time periods. The encapsulation process takes place at room temperatures, using low energy methods, that preserves the integrity of the actives. The technology is designed as a ready-to-use adjuvant allowing manufacturers to nano encapsulate the actives independently and easily using their existing process and production equipments.

## TECHNOLOGY FEATURES & SPECIFICATIONS

- Reduces particle size of actives such as fragrances, essential oils and other odorous compounds into the nano scale
- Particle size of actives can be adjusted between 20nm to 200nm, depending on final usage requirements
- Encapsulation material is naturally derived and biodegradable
- Imparts consistent actives release over time
- Prolong effective time by 3 folds

## POTENTIAL APPLICATIONS

This technology owner is keen to explore the application of this Nano Delivery Technology to home care, fabric care, and pet care.

## UNIQUE VALUE PROPOSITION

- Increases effectiveness of fragrances, essential oils and other odorous compounds
- Reduces reapplication frequencies
- Encapsulation process takes place at room temperatures, using low energy methods
- Compatible with mainstream manufacturing processes and equipments
- Available as a ready-to-use adjuvant
- Patent pending