

Thermostable and long lasting flavors for food matrices



High Density Polymeric Beads (HDB) to microencapsulate flavors & volatile compounds

Background

- Traditionally, free flavors have been used for the aromatization of food matrices, resulting in taste and smell which may be lost quickly during baking or storage due to high volatility, or deteriorated resulting in off-flavors production.
- Our technology is able to stabilize free flavors & enhance the taste performance prolonged way over time.

Sab-Tech-HDB

Heat stable flavors

Technology and innovation

Thermo sensitive technologies that allow the release of aromas at different temperatures (70-250 °C).

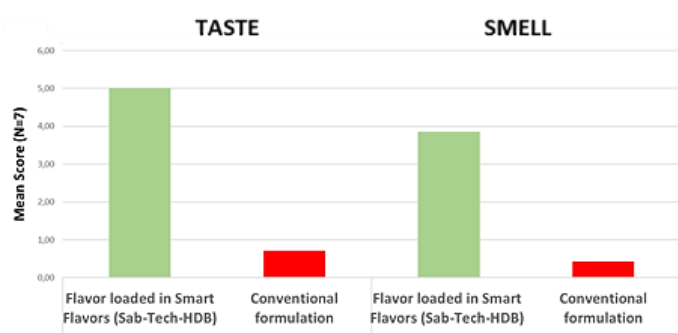
- Reduces the loss of aromas at high temperatures (food handling and baking) and produces an increase in their stability in food matrices.
- Reduces the volatility of fragrances and other volatile substances.

Advantages

- ✓ Enhances flavor thermal stability in food manufacturing under tough conditions (heat, moisture..)
- ✓ Enhances flavor physical and chemical properties.

Heat stability assay of volatile herbal flavor in bakery

- Dry powder flavor loaded in Sab-Tech-HDB was incorporated before baking.
- After baking at 180 °C for 15 minutes, taste and smell were assayed by 7 consumers.



Both taste (5x) and smell (4x) scores increased when flavors were loaded in Sab-Tech-HDB

IP: Intellectual property rights until 2040.

- ✓ PCT/EP2020/062573. Process for preparing high density, thermostable polysaccharide beads as food additives.

Team capacity

- Design and assay the performance of flavors in different food matrices: bakery, beverages, pizza, meat, etc.
- Lab scale manufacturing (up to 5 kg) by high granulation and fluid bed dryer with top spraying.

LST-Fla-HDB

Long lasting & controlled release flavor

Technology and innovation

Mucoadhesive technologies that allow increasing the residence time of aroma in the mouth

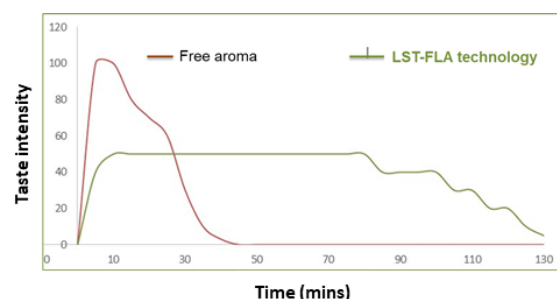
- Extends the release of the taste sensation of any type of aroma in the mouth.
- Controls the order of release of different types of mixed aromas.

Advantages

- ✓ Better taste sensation adapted to different flavors: strawberry, watermelon, peppermint, etc.
- ✓ Long lasting effect and enhancement of stability of volatile compounds.
- ✓ Different taste sensation.

Controlled and sustained release of peppermint over time

The intensity of peppermint oil incorporated in chewing gum was monitored by 6 volunteers



LST-FLA-HDB keeps peppermint taste in the mouth 3-4 times longer than a conventional system

DNA Catcher

DNA CATCHER is a company specialized in the development of a technology based on natural, biodegradable and biocompatible *High Density Polymeric beads (HDB)*, based on cheap and safe raw materials (GRAS and FOOD grade), which offer an innovative solution to the problems of environmental pollution and quality control of different sectors and industries (pharmaceutical, veterinary, food, textile, etc.).

These beads allow the encapsulation of different active ingredients (metals, drugs, microorganisms, etc.) to protect them from extreme environmental conditions and promote a controlled release in the area of action.

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