

FLAVORS & VOLATILE COMPOUNDS

Thermostable and long lasting flavors for food matrices



“We care about your success”

DNA Catcher S.L.

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“DNA CATCHER wants to be the best choice being competitive and flexible to help customers to deliver their products into the market”

“ABOUT US”

DNA CATCHER is an innovative Spanish company whose main objective is to improve the quality and performance of active ingredients using encapsulation technology in polymeric beads applied in:



Pharmaceuticals & nutraceuticals
Human and veterinary medicine



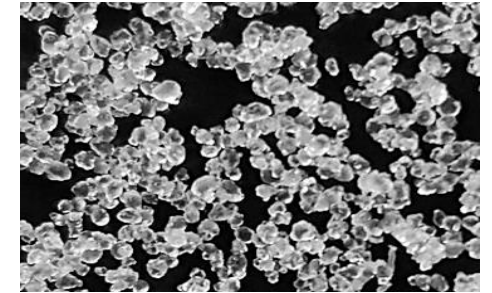
Food additives
Encapsulation of different type of food additives



Environmental health & odor control
Gas emission and bad odors neutralization



Flavors & volatile compounds
Enhancement of flavor performance in food matrices

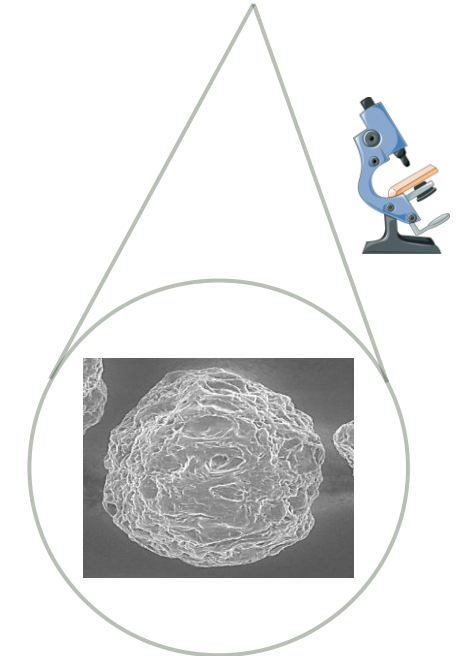


DNA CATCHER has developed their products based on **Patented Technologies** using safe, ecofriendly and Food Grade High density polysaccharides Beads (HDB-Technology) that fit to the market need with extensive application versatility.



PCT/EP2020/062573

- ✓ Easy to be manufactured at industrial scale with different sizes (0.2-2,000 μm).
- ✓ High capacity to load active molecules & microorganisms.
- ✓ Simple & standard equipment and techniques.
- ✓ Low cost Food Grade material.
- ✓ Avoiding the use of volatile organic solvents.



Team mission, vision, objectives and capacities



Multidisciplinary

Experience in multiple sectors



Specialization

Team with expertise



Creativity & innovation

Cutting edge technology



Environmental sustainability

Natural, biodegradable and biocompatible raw materials

- ❖ Assay and evaluation according to customer needs.
- ❖ Highly capable to solve problems related with stability, bioavailability, taste, compatibility, etc.
- ❖ Development of thermo, pH, and oxidation-resistant systems, which prevent the loss of volatile compounds.
- ❖ Lab scale manufacturing by high granulation and fluid bed dryer with top spraying (up to 5 kg).
- ❖ Freeze drying.
- ❖ Physiochemical assays, solubility and release studies, quality control.



BUSINESS MODEL

Make things easier: Value creation

R&D services
/contract research

“We will help you achieve your tech and market targets”



Product supply and out licensing of technology or final products



“Ready to cover your market need”

Co-development agreement

“We assume risks & love challenges with you”



Sab-Tech-HDB

Heat stable flavors

Thermo stable / thermo sensitive technologies

- Thermo sensitive technologies that allow the release of aromas at different temperatures (70-250 °C).
- Thermo stable technologies that reduce the loss of aromas at high temperatures (food handling and baking) increasing their stability.
- Reduces the volatility of fragrances and other volatile substances.

LST-Fla-HDB

Long lasting & controlled release flavor

Controlled release delivery technologies for aromas and fragrances

Our team has the capacity to design and assay the performance of flavors in different food matrices: bakery, beverages, pizza, meat, milk products, etc.

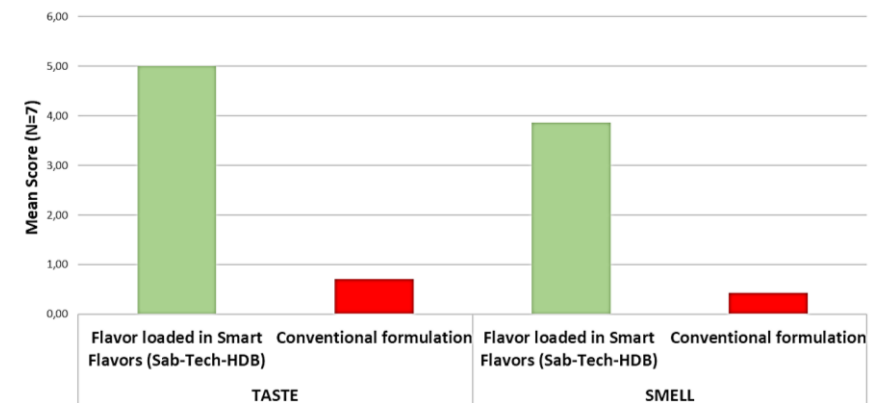


Heat stable oregano & strawberry flavors incorporated in Sab-Tech for biscuits and bakery

1. Flavor was encapsulated in **Sab-Tech-HDB** and dry powder was incorporated in food matrix before baking (0.5% w/w).
2. After baking at 180 °C for 15 minutes, taste and smell were assayed.
3. Results show records from smell and taste using 1 to 10 score.

Individual number	TASTE		SMELL	
	Flavor loaded in Sab-Tech	Conventional formulation	Flavor loaded in Sab-Tech	Conventional formulation
1	6	1	3	0
2	5	1	4	0
3	6	0	3	0
4	5	2	5	1
5	4	0	4	1
6	5	1	3	0
7	4	0	5	1

Heat stability assay of flavour in biscuits



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

Sab-Tech-HDB

Heat stable flavors

Thermo stable / thermo sensitive technologies

LST-Fla-HDB

Long lasting & controlled release flavor

Controlled release delivery technologies for aromas and fragrances

Innovative technology for chewing gums and fragrances:

- Mucoadhesive technologies that allow increasing the residence time of aroma in the mouth.
- Controls the order of release of different types of mixed aromas.

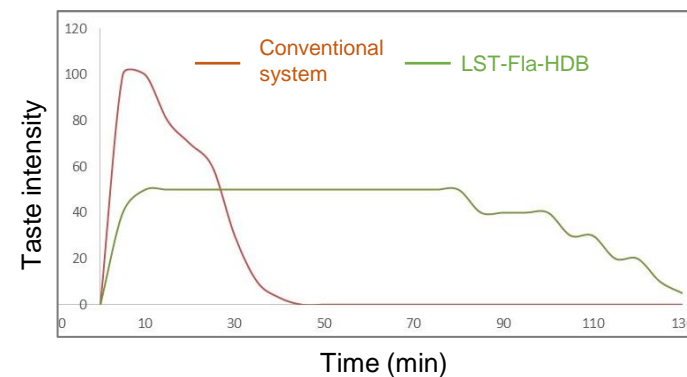
Advantages:

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



Examples:

- 1) Chewing gum loaded with menthol and mint oils (see data).
- 2) Green tea leaves loaded with menthol for the treatment of buccal mucosal inflammation (data not shown).
- 3) Fragrance formulation for smart textile (data not shown).
- 4) Controlled release and reduction of volatility of pheromones (data not shown).



Comparative study between conventional system and LST-FLA-HDB, monitoring the intensity of peppermint oil taste in chewing gum.

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

Controlled and sustainable release of peppermint oil over time

LICENSING OPPORTUNITIES & CONTACT

Technology	R&D	Efficacy	Pilot study	Current state of art
Sab-Tech-HDB	✓	✓	X	<ul style="list-style-type: none"> Product developed for herbal and sweet flavors. Looking for partners to carry out a pilot study.
LST-Fla-HDB	✓	✓	X	<ul style="list-style-type: none"> Product developed for herbal and sweet flavors. Looking for partners to carry out a pilot study.



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Technical and sales support

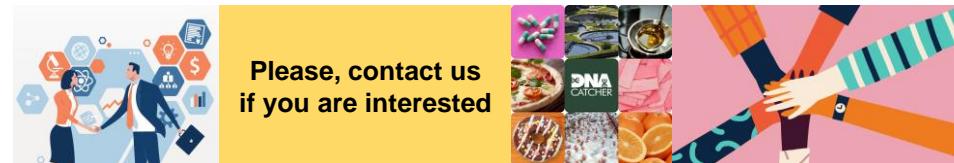
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 DNA Catcher

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Please, contact us
if you are interested

We are open to discuss collaboration, co-development or joint venture relationships with partners (out-licensing, manufacturing and supply)