4GENE

FLAVOR-ON-DEMAND

Company Profile

PUBLIC VERSION

The **4GENE** Team





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FLAVORS IN DAILY LIFE

Did you ever wonder

how aroma is kept ? how it is set free ? how it vanishes, where it goes?



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Knowing the Problem

... is the first step towards a possible solution

The 4 major challenges while working with flavor molecules in consumer product development:

Volatility Containments needed Stability

Oxidation – containment

Activability

opening of container Availability capsules, drawbacks,

now glucosides







VOLATILITY – changing the state of the flavor molecules from **VOLATILE** to **NON-VOLATILE** to ease their handling

STABILITY – we can change the state of the aroma molecules from **ACTIVE** to **INACTIVE** to extend the storage time and increase the shelf life of consumer products by more than 40x

ACTIVABILITY – when inactive, we can **CONTROL THE TRIGGER** to change the state of the aroma molecule **BACK TO VOLATILE**.

GLYCOSYLATION





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Activability of Aroma



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AVAILABILITY – **biotechnical process** enables **industry level supply quantities** at economically feasable costs

CURRENTLY SOME 40 FLAVOR GLUCOSIDES BY 4GENE

MOST ARE NATURAL COMPOUNDS

Market Segments 2019-2021





Food







Sniff & Save

Flavor Glucosides in Products ..



Deodorants

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Long-lasting effect

glucosides are cleaved by microbial enzymes

Freisetzung **3-***cis*-**Hexenol** aus 3-*cis*-Hexenyl-Glucosid **ohne** und **mit** Enzym auf der Haut über die Zeit

Blindtest; Getestete Region: Achsel

Glucosid / **Glucosid** + **Enzym** (Rapidase)

PUBLIC VERSIGNERUCHSEMPFINDUNG: 0 - 0,5 - 1 - 1,5 - 2 - 2,5 - 3 (*max.*)

Flavor on Demand ...







Foot care

Long-lasting effect, glucosides are cleaved by microbial enzymes

Masking of smells e.g. Citronellol- and Mentholglucoside



SNIFF & SAVE® by 4GENE











Surfactants – Hydrophilic-lipophilic balance



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Technology and Potentials

