



NATURAL INGREDIENTS FOR
FLAVORS & FRAGRANCES

FLAVYREN™
Natural solution



AFYREN

GLOBAL CHALLENGES

As pressure on resources continues to increase, our planet's biocapacity is gradually shrinking. Because of the ever widening gap between demand and supply of natural resources, we would need the equivalent of 1.7 Earths to meet our current needs.



Today,

1.7 Earths

to meet our resource needs

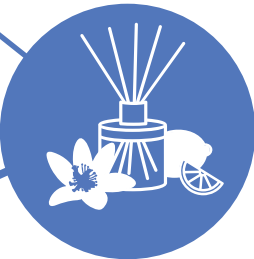


The global population keeps growing and should reach **10.3 billion people before the end of the century.**

Faced with this reality, requirements are evolving and the flavors and fragrances market is confronted with new challenges.

ORIGINAL

- Authentic and genuine ingredients for flavors and fragrances



- Growing desire for well being, for healthy and sustainable food and cosmetics with a lower impact on the environment

- Strong regulations are being put in place in Europe and the US to ensure the natural origin of the ingredients used for flavors and fragrances production.



SUSTAINABILITY

REGULATION

NATURAL



- Consumers are demanding more genuine and less human crafted products.
Flavors: authentic tastes
Natural and green fragrances

AFYREN'S COMMITMENTS

AFYREN'S 100% SEGREGATED* BIOBASED ACIDS REDUCE CARBON FOOTPRINT BY 5 COMPARED TO FOSSIL-BASED ACIDS:**



- Natural and innovative fermentation process
- Local, renewable and sustainable resources
- Fully circular model
- Renewable by-products as feedstock
- No direct competition with human food

By using **AFYREN'S** products, you

CONTRIBUTE TO DE-FOSSILIZATION OF THE INDUSTRY

... All while preserving natural resources and developing regional economy

- Local, safe and sustainable product procurement
- Low water consumption
- No additional land use
- No deforestation

What do you get?

THE POSSIBILITY TO DEVELOP AND PROMOTE INNOVATIVE AND SUSTAINABLE PRODUCTS WITH ADDED VALUE

REDUCED CARBON INTENSITY

- GHG emissions reduction (scope 3)
- Improved product carbon footprint (PCF)

ANSWERING THE MARKET'S DEMANDS

- 100% natural*** and segregated*
- Palm oil free

POSITIVE BRAND IMAGE

- Improved scores for environmental certifications
- Contribute to your CSR strategy

EFFICIENT CHAIN OF CUSTODY

- Traceable and transparent
- Limited dependency on crude oil market

Be part of a sustainable future

*Norm for biobased products

**Based on the Life cycle assessment conducted by SPHERA 2018-2019, updated 2020 following ISO 14040/14044

***Natural according to the regulation (EU) 1334/2008 definition



FLAVYREN™ IS 100% NATURAL

Unique high quality NATURAL acids for flavors and fragrances ingredients. All AFYREN acids are produced locally in Europe via a lean process, based on renewable natural raw materials. They have a high level of purity and a consistent organoleptic profile.

With FLAVYREN™, AFYREN offers a range of **7 natural organic acids** compliant to the EU Natural Flavouring Substance regulations with the lowest carbon footprint on the market.

WHAT WE OFFER



PROPERTIES

Reduced carbon footprint
Natural flavoring and tasting
substance
Biobased



APPLICATIONS

Building block for flavors &
fragrances
Natural ingredient for flavor and
fragrance formulation

FLAVORS



NATURAL US

US FDA T.21, S101.22



NATURAL EU

EU 1334/2008



HALAL *



KOSHER *



GMO FREE

FRAGRANCES



**NATURAL
INGREDIENT**



**100% NATURAL
ISO 16 128-1**

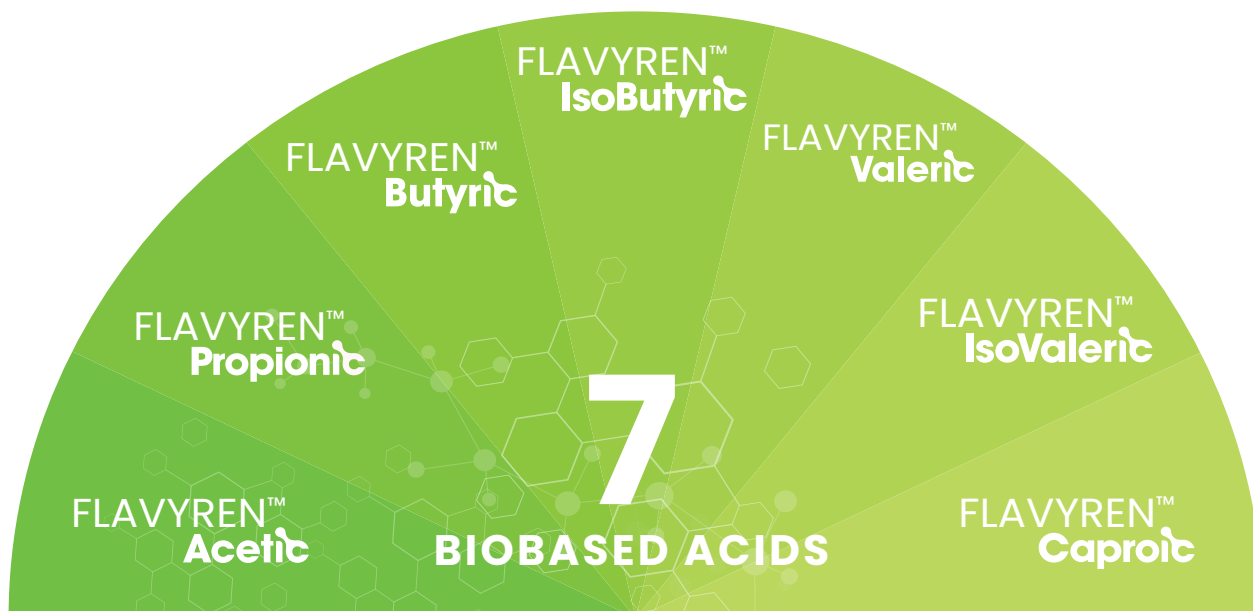


**COSMOS
APPROVED**



**ECOCERT COSMOS
approved raw material**

*Certification will be implemented for the manufacturing site



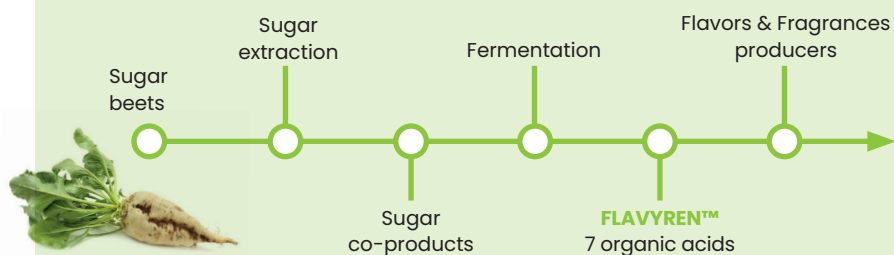
FLAVYREN™ is adapted for the creation of both flavors and fragrances.

As direct ingredients or building blocks of aromatic substances, FLAVYREN™ offers a local, natural and competitive solution for the production of a large pallet of fruit-like and dairy-like flavors.

AFYREN route to produce biobased organic acids

Natural and local value chain + lean and circular process

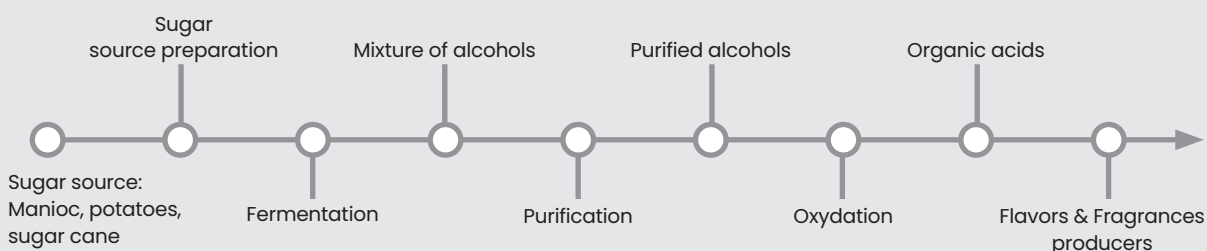
low energy consumption, renewable raw materials, no waste



An example of chemical route to produce bio-based organic acids

Natural but global and multi-step value chain with high impact on biodiversity and the environment:

high energy consumption



DID YOU KNOW ?

- That FLAVYREN™ 7 natural organic acids allow the creation of original derivatives like the Ethyl Valerate ?
- Ethyle Valerate is naturally present in the apricot flavor.
- FLAVYREN™ is a range of high quality and high purity organoleptic profile acids with consistent characteristics.



Nature is the future.

Now, more than ever it is time to move forward together towards a sustainable, competitive, innovative industry, combining ecology and economy.

With its biomimetic process and its range of seven 100% biobased acids, AFYREN is revolutionizing the world of chemistry, opening up a range of possibilities for innovation, new products and carbon footprint reduction.

JOIN THE AFYREN INITIATIVE AND SEIZE NEW OPPORTUNITIES FOR COMPETITIVENESS.



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