

NATURAL PERSONAL CARE PRODUCTS START WITH NATURAL INGREDIENTS

Bio-based succinic acid

is a natural, plant-derived building block that can be used to formulate a broad range of bio-based esters for **skin care** and **hair care**, and as a direct ingredient with properties for **effervescence** and **exfoliation**.

CREATING VALUE WITH NATURAL PERSONAL CARE INGREDIENTS THAT PERFORM




bioamber[™]

C2-C5 esters have been shown to be **effective solvents** for fragrance carriers and a multitude of other applications, while C8-C18 esters exhibit **unique emollient properties** for skin and hair care. Bio-based succinic acid is also an **effective effervescing agent**.

Applications:

Exfoliants

- Skin peels
- Creams, lotions and serums
- Cleaners and scrubs

Emollient esters

- Skin / Hair care
- Make-up & lip products
- Antiperspirants
- Pigment dispersants

Solvents

- Sunscreens
- Skin-penetrating agents
- Fragrance carriers
- Nail polish removers

Effervescent

- Bath tablets
- Bath salts

Others

- Surfactants / Emulsifiers
- Polymers

BioAmber bio-based succinic acid is:

- A natural ingredient made from plant-based feedstocks
- USDA BioPreferred® and biodegradable
- Carbon neutral, energy efficient process

Benefits of bio-based succinic acid in personal care market

- Achieve differentiation and performance through natural, bio-based product
- Natural ingredients claims
- Ability to tailor performance

**LET'S BUILD
A GREENER WORLD,
ONE CHEMICAL
AT A TIME!**



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