


FREY & LAU 

explore your senses

Sustainability



Agent Meeting 2023



*Our decisions
in day-to-day
operations as well as
with respect to all long-term plans
and investments are
made in a responsible
and sustainable way.*

Management

Family-managed in the fourth generation.

Dr. Maja Zippel und Claas Nendel have been leading the company for more than 15 years, jointly demonstrating unity, stability and innovative vision.

As a family-managed business, we think and plan across generations. Aspects of economic, ecological and social sustainability as well as the associated responsibility are our top priority and define our corporate philosophy.





4 pillars of sustainability

4 pillars for a reliable, innovative and forward-looking partnership

- Sustainable handling of resources: reduction of greenhouse gas emissions
- Sustainable products: safe, forward-looking, resource-efficient
 - On request: natural, palm oil-free, RSPO-certified, vegetarian, vegan, organic, fair trade, kosher, halal, traceable to the field, natural origin, upcycling concepts, etc.
- Sustainable supply chain: traceability back to the source
- **Together with all employees, we are FREY&LAU**

Aspects of sustainability





Certified greenhouse gas reduction

SBTi

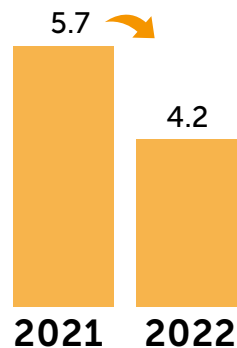
- Science Based Targets initiative initiated by the United Nations, WWF, CDP + World Resources Institute
- Scientific proof of our commitment

Roadmap for participating in the programme

- 2023: Creating the valid data base for scope 1, 2 and 3
Preparing the corresponding reports
Target-setting
- 2024: Joining the SBTi programme, status “committed”

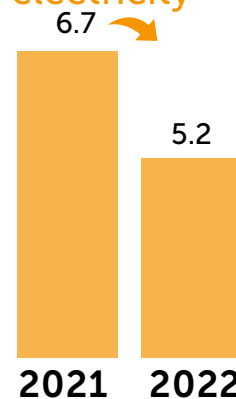
Energy: Carbon footprint

CO₂ scope 1, direct
CO₂ emissions: from gas



Revenue-based in
tonnes of CO₂ / EUR
million of revenue

CO₂ scope 2, indirect
CO₂ emissions: only from
electricity



Revenue-based in
tonnes of CO₂ / EUR
million of revenue

Energy: CO₂ reduction

Implemented projects aimed at reducing CO₂ emissions

- Consolidation of logistics
- Optimisation of the compressed air system, the heating circuit and steam generation
- Automation of the distillation plants

Planned projects aimed at reducing CO₂ emissions

- Consolidation and new construction of the flavour production facility in line with the KfW-55 energy efficiency standard incl. installation of a photovoltaic system





Energy: Sustainable buildings

Sustainability in new, renovated and buildings

- High-quality insulation
- Underfloor heating and room ventilation guarantee consistent storage conditions throughout the year in logistics center
- Heating and hot water production using highly efficient, eco-friendly heat pump and condensing gas boiler
- Intelligent lighting technology throughout all buildings:
light level measurement, motion detectors, LED technology
- Automatic control of heating, cooling and ventilation in laboratories and development centres

Water: Consumption / Protection

SMART WASTEWATER TREATMENT =GROUND WATER PROTECTION

- Steam cleaning of tanks, mixing containers and mixing units without using surfactants or solvents
- Wastewater is pretreated in a coalescence separator before being discharged into local sewage treatment plants
- Wastewater complies with the statutory requirements
- Near-surface ground water from our own well for production process cooling





Water: Reduction of drinking water consumption

Implemented measures aimed at reducing drinking water consumption

- Near-surface groundwater from our own well for watering the green spaces
- Particularly water-saving machine cleaning in the production rooms

Planned measures aimed at reducing drinking water consumption

- Optimisation of the cooling circuit in the encapsulation units
- Optimisation of container cleaning and the associated hot water consumption

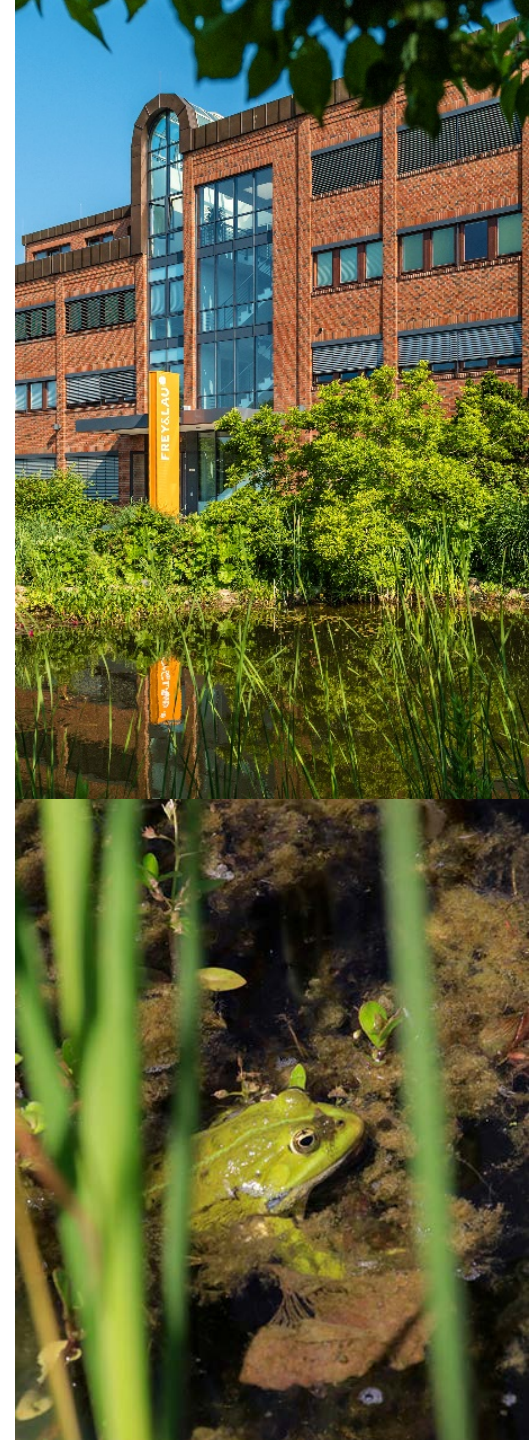
Environmental protection: Clean water, clean air, clean soil

Environmental protection starts at home

- Company premises with ponds and numerous domestic plant species for nature conservation and as recreation areas for employees
- Our own environmental protection foundation with nature conservation areas in Mecklenburg-Western Pomerania, Brandenburg and Saarland measuring 600 ha in total: meadow orchards, orchid meadows, ponds, natural (ancient) woodland (>100 years), wetlands, bogs, peatland meadows
- Protected tree population on 4% of the company premises

Structural measures

- Protection of soil and groundwater: storage areas with special flooring
- Efficient exhaust air treatment with activated carbon, thermal aftertreatment and catalytic thermal aftertreatment with efficient heat recovery
- Sewage treatment; regular testing of the sewage system; above-ground laying of sewage pipes in new buildings
- Insect-friendly exterior light systems





Environmental protection: Transport

Transport of raw materials

- Proximity to the Port of Hamburg allows for eco-friendly transport of all goods from overseas by sea freight
- Bundling of transports from the port to the headquarters in Henstedt-Ulzburg

Transport of products to customers

- Bundling of transports to customers
- Certified forwarder: AEOF status, environmental protection (ISO 14.001), occupational safety (s.a.f.e Plus) and food safety (IFS Logistics)
- Saving of fuel and prevention of engine wear by using super diesel

Material management / Waste management

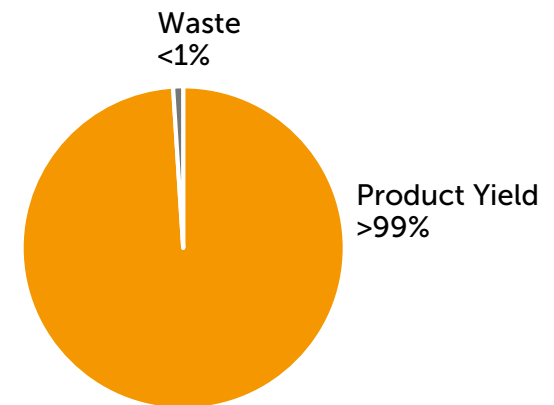
Sustainable waste management

- Product waste well below 1%
- Sorting of waste and materials by source and composition:
about 20 different waste groups
- Collaboration with certified waste disposal and waste management companies:
proper, eco-friendly, regional and with a high occupational safety standard



Optimized material management

- Yield > 99%
- Optimisation of filling losses to a few grams instead of kilograms per batch
- Optimisation of filtration processes: reduction of losses by up to a factor of 10





Eco-friendly packaging



Outbound packaging: recyclable

- 100% recyclable packaging for our liquid products
- Interior-coated drums, HDPE canisters and drums with PE inliner: 100% recyclable
- HDPE IBCs: on request with recycled content
- Sustainable reusable stainless steel containers

Packaging of our raw materials

- Recyclable packaging by collaborating with suppliers and by not using composite materials
- About 80% of used HDPE canisters are processed into recyclates
- Empty steel drums are put to further use
- Other packaging is properly disposed of

Consumer safety

- Commitment to using exclusively safe constituents in order not to jeopardise human health and safety in any way
- Proactive implementation of regulatory changes due to membership and active involvement in associations of the flavor industry (DVAI; EFFA; IOFI), the fragrance industry (DVRH; IFRA) and the essential oil industry (VDC; EFEO)
- No use of SVHC published by ECHA
- Use of substances registered under REACH and registration of our raw materials under REACH
- Communication of hazardous substances through labelling and documentation



Eco-friendly products

Depending on customer's requests and requirements:

- Low in palm oil / Palm oil-free
- RSPO-certified (from 2023)
- Vegetarian / Vegan
- Natural flavours / fragrances / essential oils
- Traceability to the field
- Declaration of biodegradability
- Declaration of percentage of ingredients of natural origin
- Upcycling concepts
- EU Ecolabel
- Nordic Swan



Sustainability: Certificates

We provide our customers with regularly updated reports on our sustainability and environmental protection measures on the following platforms:

- Sedex / SMETA 4-Pillar:
Human rights, labor rights, occupational health and safety
- Ecovadis:
Silver-Status

Environmental protection, use of resources
- CDP:
Climate: CO₂ emissions and energy consumption;

Water: water consumption / wastewater generation



Employees: Constructive cooperation

- All employees are part of the FREY&LAU family. Offering them a safe, reliable and long-term work environment with opportunities for growth is therefore very important to us.
- Our employees work together in an multi-disciplinary way across departments to develop, produce and deliver our products.
- Compliance with social and labour standards is a given. We document it on the Sedex.
- This is verified by a SMETA-4-Pillar audit every four years.



Supply Chain

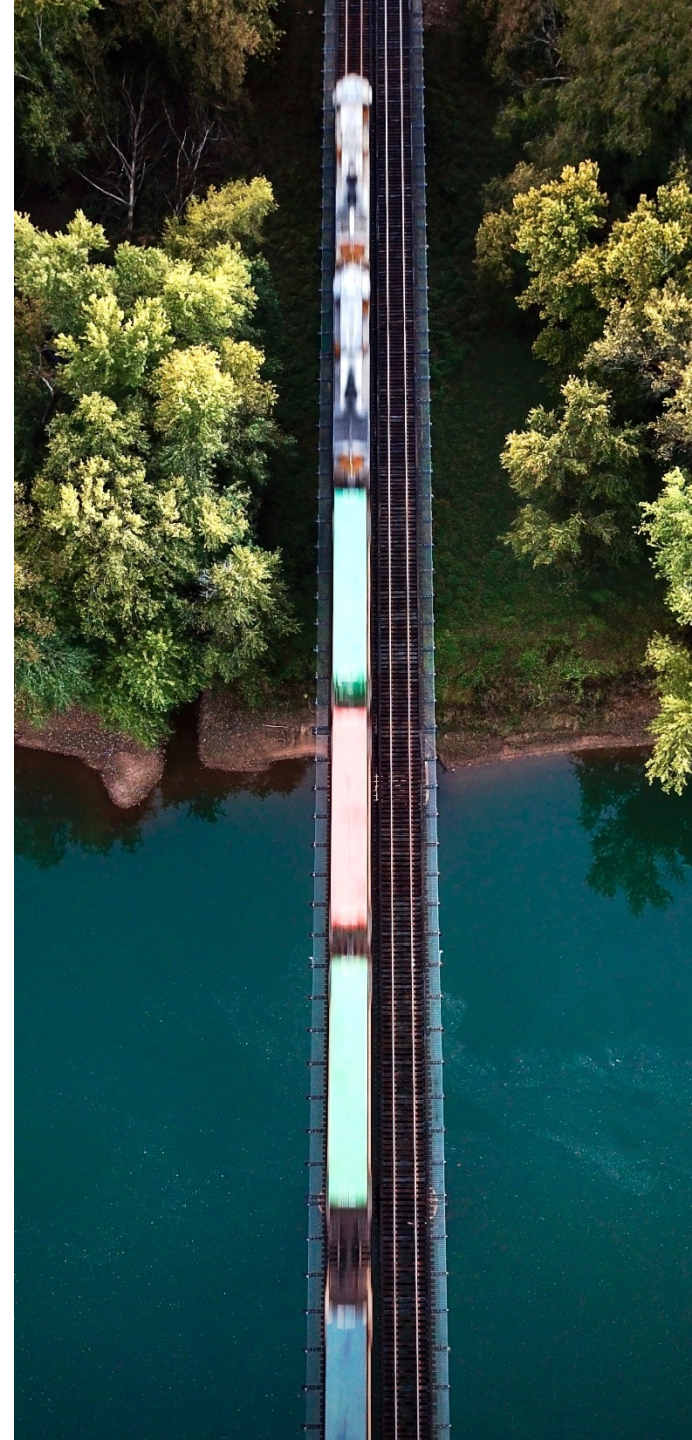
As a leading manufacturer of essential oils, perfume oils and flavours with more than 180 years of experience, we collaborate with our suppliers in procuring our raw materials and trace the material just to its very beginning, e.g. on the field.

Supply chains

SUPPLY CHAIN DUE DILIGENCE ACT

As a medium-sized manufacturer with fewer than 1,000 employees, we do not fall under the statutory requirements, but implement them as a matter of course:

- Code of conduct: since 2009
- Risk analyses: by countries and suppliers
- Risk management: through visits and on-site audits
- Grievance mechanisms: established and communicated
- Continuous improvement through regular reviews
- Publication of the results on Sedex



Essential oils

SOURCING

Product safety and supply chain security start in the cultivation area – we travel around the globe to purchase raw essential oils:

- Responsible and trusting collaboration with suppliers
- Reliable supplier relationships and permanent availability of the products
- Regular supplier audits
- Joint qualification and certification of production facilities on site
- Establishment of quality management systems at suppliers
- Development of a data base for carbon footprint
- Improvement of occupational safety, traceability, production conditions, food fraud and product safety



Essential oils and natural extracts

SUSTAINABLE SUPPLY CHAIN TO THE FIELDS



Caraway oil

Cassia oil

Cinnamon oil

Citronella oil

Clove bud oil

Eucalyptus oil

Fennel oil

Fir needle oil (Siberia)

Geranium oil

Lavender oil

Lemon oil

Majoram oil

Mint oil



Myrtle oil

Nutmeg oil

Orange oil

Peppermint oil

Rosemary oil

Sage oil (Spain)

Spike lavender oil

Star anise oil

Tea tree oil

Thyme oil

Turpentine oil

Vanilla extract

Wintergreen oil

Mint oil and peppermint oil

SUSTAINABLE DEVELOPMENT IN UTTAR PRADESH, INDIA

Establishing a supply chain that can be traced back to cultivation:

- Cultivation in small-scale farming structures (Ø 1.3 ha per family)
- Essential oil extraction= the most important and often the only source of income
- Education on improved cultivation conditions according to the latest research findings of CSIR-CIMAP
- Distribution of seeds / seedlings of CSIR-CIMAP
- Water used at steam distillation sites complies with drinking water regulations
- Yield increase at the distillation site
- SAI-FSA 2.1 silver benchmark





Vanilla extract from Madagascar

SUSTAINABLE DEVELOPMENT IN THE SAVA REGION

Strengthening the local communities in one of the world's poorest countries:

- Vanilla beans are cultivated on site and processed into extract by FREY&LAU
- Improved access to medical care, preventive medical care, clean drinking water and education
- Support in cultivating agricultural products to cover the local demand

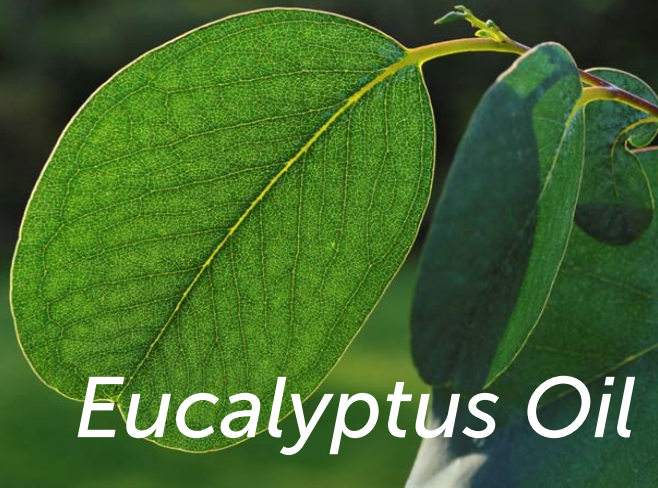


Orange and Lemon Oil

SUSTAINABLE OILS FROM UPCYCLING PORTFOLIO

- Lemon and orange oil is a by-product: the fruits are harvested for the fresh fruit or the fresh juice market
- Net zero-CO₂-production possible with special partners
- Bio-certified orange and lemon oil
 - No impact by pesticides and post-harvest treatment
 - Enhanced certified biodiversity with selected partners
- Low pesticide orange and lemon oil
 - Price conscientious product range with pesticide ranges close to bio products, reduced impact on environment by reduced use of plant protection chemicals and no post-harvest treatment
- Conventional orange and lemon oil
 - Price conscientious product
 - Biodiversity projects in place



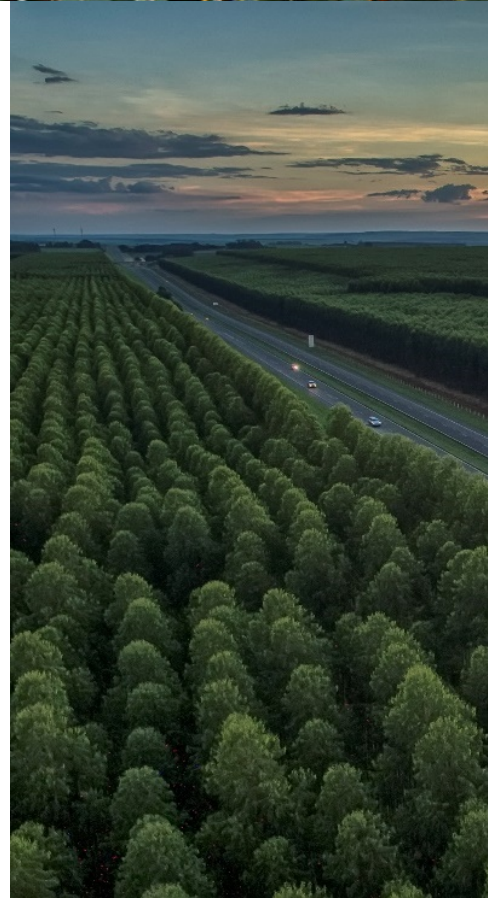


Eucalyptus Oil



A VERSATILE OIL FOR FOOD, FEED, COSMETICS AND PHARMA

- China:
 - A product from our upcycling portfolio
 - Part of our GMP product range with certified GACP supply chain
- Australia:
 - Zero-waste and green energy farm with exceptional low water usage
 - Part of the de-risking strategy






Turpentine Oil




SUSTAINABLE FORESTRY IN CHINA AND PORTUGAL

- A product from our upcycling portfolio
- Part of our GMP product range with certified GACP supply chain
- Requirements for sustainable forestry are met
- Pine forests play an important role in ecosystem: planted in fight of erosion and desertification in coastal regions of Portugal
- Drinking water system installed at the distillation sites
- Economic efficiency of the site increased by decoupling oil and resin production for special projects





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