

FROM FOREST TO FRAGRANCE

PAPER MILL

PAPER & PULP

Pine is used to make pulp for paper through a chemical process that produces a by-product called Crude Sulfate Turpentine (CST).

BY-PRODUCT

IFF uses the by-product as a raw material for manufacturing fragrance ingredients.

1 SOURCING MINDFULLY

CST

LOCALLY SOURCED

Our fragrance ingredient facility in Jacksonville, Florida sources more than 80% of its CST from the southeastern United States.

24%

LOCAL

24% is sourced within 100 miles of Jacksonville.

TRANSPORTING EFFICIENTLY

More than 50% of CST arrives by rail.

66%

MORE EFFICIENT

Transporting by rail instead of truck saves 0.08 kg of carbon dioxide equivalent per ton-mile.

FRACTIONAL DISTILLATION

Fractional distillation separates the CST into alpha- and beta-pinene.

98%

EFFICIENT

The CST production process is 98% efficient, with only 2% waste.

α

ALPHA-PINENE

β

BETA-PINENE

A VARIETY OF FRAGRANCE INGREDIENTS

Alpha- and beta-pinene are further fractionated to make more than 40 fragrance molecules.



Terpinolene

Used in fine fragrance, personal care, fabric care and home care.

Odor Family: Citrus
Fresh lime-pine top note.



Iso E Super®

Used in fine fragrance, personal care, fabric care and home care.

Odor Family: Woody
Smooth, woody, amber with unique aspects giving a velvet like sensation.



Loblolly Pine
Pinus taeda

Longleaf Pine
Pinus palustris

Slash Pine
Pinus elliotii



U S A

100-mile radius
IFF Facility
Jacksonville, Florida

The CST is sourced directly from paper mills in Florida, Georgia, South Carolina, North Carolina, Tennessee, Arkansas, Mississippi and Louisiana.

By Rail

By Truck

2 MANUFACTURING EXCELLENCE

-71%

WATER

Since 2010, our facility in Jacksonville, Florida has reduced water use per metric ton of production by 71%.

-4%

ENERGY

Since 2010, our facility in Jacksonville, Florida has reduced energy use per metric ton of production by 4%.

2% WASTE

3 SUSTAINABLE PRODUCTS