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# EDITORIAL

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Captive ingredients embody the soul of Firmenich – they express our uniqueness and responsible leadership.

Firmenich's **SHARING INNOVATION** program is designed to share selected Firmenich signature ingredients.

With this Flavor Ingredients 2020 collection, we are sharing our legacy and *savoir-faire* in citrus and high-tech extraction methods, offering an endless source of inspiration to creators, as well as solutions for clean-label creations.





# DISCOVER OUR INGREDIENTS



## CITRUS

- ORANGE SESQUITERPENELESS FAB 968726
- ORANGE OIL 40X DECOL FAB 968724
- LEMON CITRONOVA® 16X FAB 926520
- GREEN MANDARINE CITRONOVA® FAB 926528
- LEMON TETRAROME® FAB 987333



## SUPERCRITICAL CO<sub>2</sub> EXTRACTS

- TEA WHITE CHINA SFE 987721
- TEA GREEN ORGANIC SFE 987725
- PEANUT SFE 911230
- OAKWOOD CHIPS SFE 923036



# #1 IN CITRUS

## DELIVERING A LEGACY OF LEADERSHIP IN AUTHENTIC CITRUS



For more than 75 years, Firmenich has advanced its citrus tonality expertise through continued exploration, technological innovation, and dedicated craftsmanship. Our co-innovation partnerships with growers and fruit processors provide differentiating knowledge and raw material access that translates into the most comprehensive creative palette.

Our integrated network of global specialists deliver localized preference for all food and beverage applications.

Authenticity is the action standard for every decision we make. From #NATURALSTOGETHER initiatives at source to ingredient innovation, and from responsible technologies to sustainable solutions, partnering with Firmenich connects you to a world of true-to-fruit experiences.

# CITRUS PORTFOLIO



- |                                       |                                       |
|---------------------------------------|---------------------------------------|
| 946946 GRAPEFRUIT OIL DECOL           | 926477 ORANGE CITRONOVA® 5X FAB       |
| 946979 GRAPEFRUIT OIL 5X              | 926440 ORANGE CITRONOVA® 10X          |
| 985950 GRAPEFRUIT TERPENES            | 926444 ORANGE CITRONOVA® 20X FAB      |
| 926528 GREEN MANDARINE CITRONOVA® FAB | 926437 ORANGE CITRONOVA® 60X FAB      |
| 956815 GREEN MANDARINE OIL 4X         | 968424 ORANGE ESS 3X                  |
| 986156 GREEN MANDARINE TERPENES       | 968457 ORANGE ESS 10X                 |
| 926535 LEMON CITRONOVA® 5X FAB        | 968392 ORANGE OIL 10X                 |
| 926520 LEMON CITRONOVA® 16X FAB       | 968724 ORANGE OIL 40X DECOL FAB       |
| 926521 LEMON CITRONOVA® 25X FAB       | 974771 ORANGE OIL DECOL               |
| 925646 LEMON ESS 3X                   | 968509 ORANGE PEEL EXTR               |
| 925661 LEMON OIL 4X                   | 968726 ORANGE SESQUITERPENELESS FAB   |
| 925589 LEMON OIL 5X                   | 986243 ORANGE TERPENES CITRONOVA® FAB |
| 925615 LEMON OIL 10X                  | 987442 ORANGE TETRAROME® FAB          |
| 925593 LEMON OIL TERPENELESS          | 968374 ORANGE VALENCIA OIL 5X         |
| 985462 LEMON TERPENES                 | 968442 ORANGE VALENCIA OIL DECOL      |
| 987333 LEMON TETRAROME® FAB           | 968366 ORANGE VALENCIA OIL 5X DECOL   |
| 926512 LIME CITRONOVA® 2X FAB         | 926524 TANGERINE CITRONOVA® FAB       |
| 955265 LIME OIL 5X                    | 984692 TANGERINE CRAVO OIL 4X         |
| 926469 LIME TAHITI CITRONOVA® FAB     | 986467 TANGERINE CRAVO TERPENES FAB   |
| 986056 LIME TERPENES                  | 984678 TANGERINE OIL 5X               |
| 987423 MANDARINE TETRAROME® FAB       | 984710 TANGERINE OIL 5X DECOL         |
| 968402 ORANGE CARBONYLES              | 986470 TANGERINE TERPENES             |

ORANGE SESQUITERPENELESS FAB  
968726

ORANGE OIL 40X DECOL FAB  
968724



"ORANGE brings richness and depth to the flavor, thanks to the fully balanced, sweet, fresh, fruity, zesty and aldehydic notes made possible by our highly specialized Firmenich separation and concentration technologies."

*Charles Kaiser, Flavorist*

### SOURCED FROM

Brazil - Mexico - USA



CROP SEASON IN ALL  
SOURCING COUNTRIES:

J F M A M J J A S O N D

### ORGANOLEPTIC DESCRIPTORS

Fatty, peely, sweet, woody.

**ORANGE SESQUITERPENELESS FAB** contributes that sweet, fresh, peely-aldehydic middle body of orange often lost in juice processing.

#### DEMO

Application: Bottled water  
Natural Orange Flavor (0.15%) bringing 1.0% of ORANGE SESQUITERPENELESS FAB  
Ingredient dosage in the demo:  
0.0015% (15 ppm)

### ORGANOLEPTIC DESCRIPTORS

Floral, citrus, animal.

**ORANGE OIL 40X DECOL FAB** adds a fruity, zesty brightness reminiscent of freshly picked sweet oranges.

#### DEMO

Application: Bottled water  
Natural Orange Flavor (0.15%) bringing 0.9% of ORANGE OIL 40X DECOL FAB  
Ingredient dosage in the demo:  
0.0013% (13 ppm)

## LEMON CITRONOVA® 16X FAB

926520

CAS: 0008008-56-8

## GREEN MANDARINE CITRONOVA® FAB

926528

CAS: 0008008-31-9

CITRONOVA® is a distillation process proprietary to Firmenich, which decreases the amount of Limonene in the extract, enabling a unique range of citrus ingredients.

Available in Orange, Lemon, Lime, Tangerine and Green Mandarin and ultra cost-efficient, our CITRONOVA® range is popular with flavorists, as the profile it adds to a composition is very close to original citrus oil.

### SOURCED FROM

Argentina - Italy - Mexico

### SOURCED FROM

Brazil



CROP SEASON IN ALL SOURCING COUNTRIES:

J F M A M J J A S O N D

CROP SEASON IN ALL SOURCING COUNTRIES:

J F M A M J J A S O N D



### ORGANOLEPTIC DESCRIPTORS

With citrus, fruity, aldehydic notes, LEMON CITRONOVA® 16X FAB offers a natural peely effect.

#### DEMO

Application: Bottled water  
Natural Lemon Flavor (0.10%) bringing 1.0% of LEMON CITRONOVA® 16X FAB  
Ingredient dosage in the demo: 0,001% (10 ppm)

### ORGANOLEPTIC DESCRIPTORS

GREEN MANDARINE CITRONOVA® FAB adds juicy green notes with aldehydic facets.

#### DEMO

Application: Bottled water  
Natural Mandarin Orange Flavor (0.10%) bringing 0.2% of GREEN MANDARINE CITRONOVA® FAB  
Ingredient dosage in the demo: 0.0002% (2 ppm)



# LEMON TETRAROME® FAB

987333

CAS: 0008008-56-8

**TETRAROME®** is a proprietary process that yields a range of citrus extracts with a unique analytical and organoleptic profile, containing a high concentration of polar components.

Enhancing the solubility and stability of citrus oils, our cost-efficient Tetraromes bring an incredible freshness and length to compositions, as well as a mouthwatering candy-like sweetness.

## SOURCED FROM

Argentina - Italy - Mexico



CROP SEASON IN ALL SOURCING COUNTRIES:

J F M A M J J A S O N D

## ORGANOLEPTIC DESCRIPTORS

**LEMON TETRAROME® FAB** displays sweet notes with slight candy and peely facets.

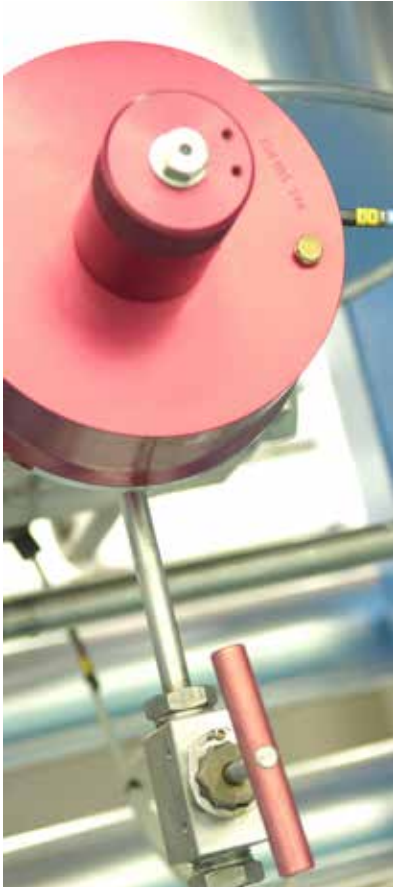
### DEMO

Application: Bottled water  
Natural Lemon Flavor (0.10%) bringing 2.25% of LEMON TETRAROME® FAB  
Ingredient dosage in the demo:  
0.0022% (22 ppm)





# #1 SUPERCRITICAL FLUID EXTRACTION



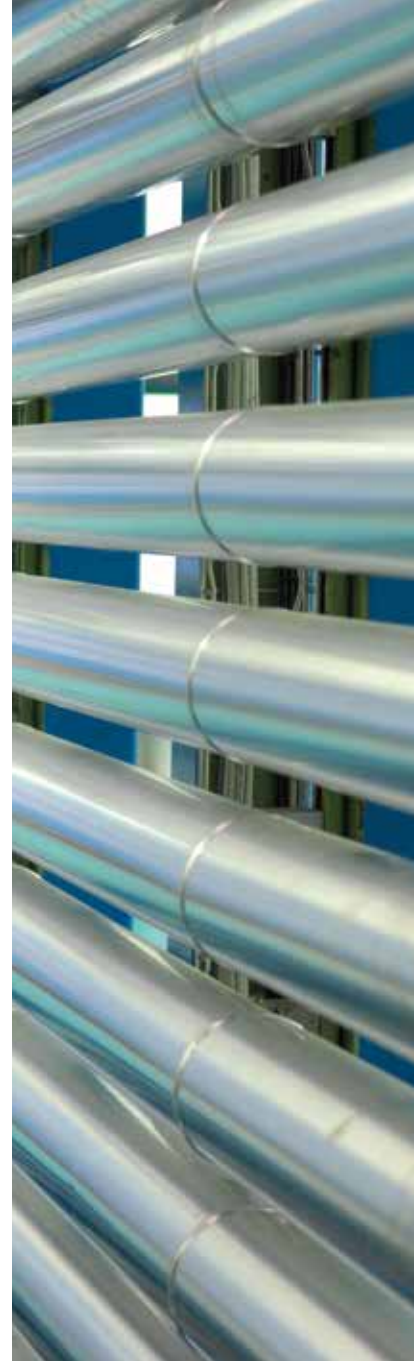
## FROM PIONEER TO LEADER IN SUPERCRITICAL FLUID EXTRACTION

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With decades of experience in botanical raw material extraction and supercritical fluid extraction, Firmenich is well placed to address customers' growing demand for authentic, natural taste and scent experiences.

Supercritical CO<sub>2</sub> extraction offers the safest, cleanest, and highest-quality method of extracting natural botanicals, from flowers and nuts to coffee and tea.

Firmenich has been a pioneer in supercritical CO<sub>2</sub> extraction for more than 30 years, creating game-changing, natural ingredients. This technology strengthens our leadership in naturals by enabling us to capture the exact, authentic and vibrant notes we want from natural ingredients.



"CO<sub>2</sub> extraction is a gentle process, making each extract utterly unique and different from every other, and preserving the freshness and complexity of the natural raw material. It gives creations a signature that is far more authentic and true to the natural flavor profile."

*Brigitte Pellen, Flavorist*

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TEA WHITE CHINA SFE

987721



### DESCRIPTORS

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This **WHITE TEA** extract captures the floral-fresh, green and fruity-citrus notes of this most delicate and subtle of teas.

#### DEMO

Dosage: 150 ppm in 3% sweetened water

TEA GREEN ORGANIC SFE

987725



### DESCRIPTORS

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Organically grown **GREEN TEA** is extracted with utmost care to reconstitute its full natural complexity, with notes that range from green to herbal-dry, straw and cereal.

#### DEMO

Dosage: 150 ppm in 3% sweetened water



PEANUT SFE

911230



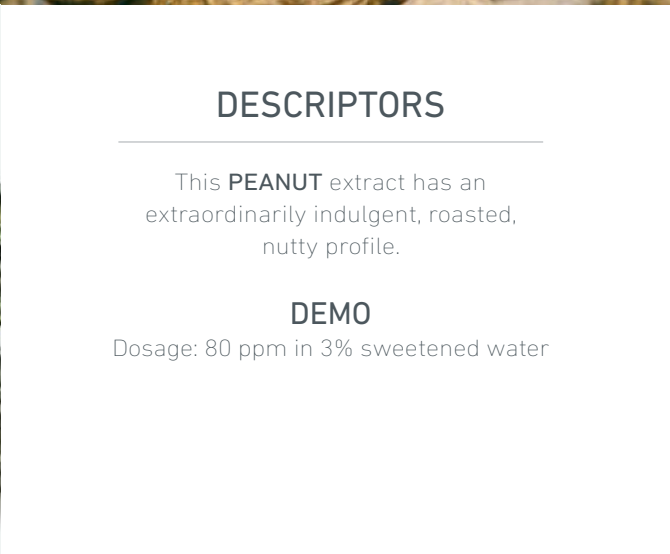
### DESCRIPTORS

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This **PEANUT** extract has an extraordinarily indulgent, roasted, nutty profile.

#### DEMO

Dosage: 80 ppm in 3% sweetened water



OAKWOOD CHIPS SFE

923036



### DESCRIPTORS

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Woody, phenolic, smoky, this extract of **OAK CHIPS** obtained during the process of barrels crafting brings a unique character to creation in the Alcoholic Drinks flavors and brown notes.

The aromatic and extremely well balanced profile offers a breakthrough flavor enhancer.

#### DEMO

Dosage: 100 ppm in plain water

