

European Notes: New and Notable Flavor and Fragrance Ingredients

Highlights from the Amsterdam-based British Society of Flavourists' (BSF) Table Talk Exhibition^a

Introduction by David Baines, Flavor Chemist and Food Safety Consultant, BSF Organizer

The fourth table talk exhibition held in Amsterdam on the February 23 was a complete sellout with 173 delegates and exhibitors attending from more than 70 companies. Each year the event gets larger and more and more companies are expressing the wish to exhibit as the delegate base grows from countries such as Vietnam, Malaysia, India, Russia, Turkey, Chile and the United States.

Success and Growth

The BSF was delighted that Jeb Gleason-Allured and Paige Crist from *Perfumer & Flavorist* magazine made the trip from New York and sponsored the dinner held for exhibitors on the evening before the exhibition. The dinner was held in the Haesje Claes restaurant, which serves traditional Dutch cuisine and the evening was a great success (Page 11). Next year we intend to extend the dinner to delegates so those staying the night before the event can also attend.

This year there were 21 companies exhibiting flavor raw materials at the exhibition during 13 parallel and consecutive 20-minute sessions spread throughout the day. It did mean that delegates could only visit a maximum of 13 of the 21 exhibitors, but companies are now sending more than one delegate so that all materials can be evaluated. Delegates seem to like the format because there is no time for lengthy previews and marketing pitches from exhibiting companies during the 20-minute face-to-face session.

The BSF is sensitive to the fact that there is a limit to numbers with this sort of event, which is rather like a commercial version of speed dating where a balance has to be maintained between the number of delegates and number of exhibitors. Too many exhibitors would limit the number that delegates could visit during the course of one day, and too many delegates would swamp the exhibitor base. There is a limit to the size of the event, but the BSF will look at all the options available for the exhibition in 2013, such as a two day event with different exhibitors on each day or a biannual event in two different geographical locations—or keep it as it is. There is one thing for sure: there will be another exhibition next year, so look out for the early advertising to secure a place.

—David Baines

^aFEMA# and additional sensory and source information provided by suppliers



Ingredient Highlights

Below is a selection of ingredients offered by exhibitors, listed in alphabetical order by company name. Readers interested in receiving samples should contact Jeb Gleason-Allured, editor in chief, (jallured@allured.com):

Advanced Biotech Ltd. displayed γ -nonalactone, natural, which had a coconut, creamy, waxy, sweet buttery character, with some bread notes. It is useful in tropical fruit and dairy flavors and alcoholic beverages at levels of 50–100 ppm.

β -Damascenone, natural, was floral, very clean, earthy, woody, herbal, green and fruity with spicy notes. It is useful in apple, apricot, berry, tea and vanilla flavors at levels of 25–100 ppm.

Benzyl isovalerate, natural, was sweet, fruity and balsamic with a tropical fruit character. It is useful in berry flavors at a level of 10–25 ppm.

Dimethyl sulfide, natural, was sulfurous, with vegetable, tomato, asparagus and creamy notes and can be applied in flavors at levels of 1–25 ppm.

Coffee concentrate FTNF, natural, derived via alcoholic extraction, was dark, roasted coffee with brown caramel notes and is appropriate for use at levels of 27–75 ppm.

Looking to connect with a supplier?
Contact the Editor in Chief at jallured@allured.com.

Agrumaria Corleone's winter lemon oil 100% was cold pressed from winter lemons. It had green and peely notes and featured a high citral content.

The **summer lemon oil** was cold pressed. It had fruity and juicy notes and a high sesquiterpene content.

The **lemon oil extract terpeneless** was a water-soluble ethanolic extract with a juicy note.

The **lemon oil fivefold** had a green and peely note. Its citral content was greater than 10%.

Lemon T-flavor was a blend of essential oils with a top note of lemon. Its typical application is tea.

Axxence Aromatics' 1-octen-3-ol, natural (FEMA# 2895), derived from mushrooms, had an earthy, mushroom character appropriate for savory applications.

Phenylpropanal, natural (FEMA# 2887), derived from cinnamaldehyde, had a green, floral, citrus and melon character appropriate for citrus and melon flavors.

2,4-Decadienal, natural (FEMA# 3135), derived enzymatically from potatoes, had a fatty (chicken fat note), green, citrus, fried chicken character that can, interestingly, find use in citrus profiles.

2-Methyltetrahydrofuran-3-thiol, natural (FEMA# 3787) was a beef top note with a meaty, beefy, chickenlike character.

4-Mercapto-4-methyl-2-pentanol, natural (FEMA# 4158) was fruity and sulfurous, appropriate for wine and citrus profiles.

DSM Food Specialties' natural Maxavor Key Chicken YEX-H was sulfury, delicate and round, making it appropriate for chicken middle notes.

Maxavor Key Beef YEX-H was a highly concentrated meaty, mild roastlike, slightly sweet beef middle note.

Maxavor Key Roast YEX-H was a strong roast, char-grill middle note.

Maxagusto G-28 was a highly concentrated material with the taste and aroma of freshly fried garlic.

Maxagusto 0-31 was a highly concentrated material with the taste and aroma of freshly roast onion.

David Michael Europe's 5X vanilla extract 35819M featured intense woody, prunelike and resinous notes appropriate for profiles including Irish cream and liqueur.

2X Tahitian vanilla extract 35817M had sweet, anise- and cherrylike notes rounded with tobacco and almond notes.

Cocoa distillate 15873M featured dark, bitter, chocolate, cocoa and powdery notes with a nutty and nut skin complement.

Cocoa distillate 486M featured clear, sweet, acidic notes that could be used for Irish cream profiles.

20X Vanilla concentrate/extract 9728M had woody and brown notes and a creamy presence.

Destilla Flavours & Extracts' tomato flavor 109065 FTNF had a fruity fresh tomato character with green notes.

Quince flavor 107005 FTNF was sour and quincelike.

Rum distillate 107300 possessed Caribbean rum notes and a distinct sweetness appropriate for ice cream profiles.

Fresh dill extract 229635 featured fresh dill notes.

Cucumber distillate 103990 had a profile that was green, fresh and cucumber.

Döhler Group's 581788 natural orange juice flavor was juicy, fruity, sweet, fleshy and ripe.

513636 Natural orange juice flavor was fruity, sweet, fresh, juicy and greenish.

584550 Ethylbutyrate ex orange 3.5% was sweet, juicy, fleshy and clean.

592011 Orange valencene fraction 77% was juicy, fleshy and clean.

204554 Orange decanal fraction 80% was peely and dry albedolike.

Elixarome's naringin isolate was alcohol-soluble and possessed the bitterness of grapefruit.



From left, Gemma Garner, Steve Pearce and Victoria Lopez (all Omega Ingredients)



Anne Kimber and John Lee (both Lionel Hitchen)



From left, Liesbeth van Gorp, Jack Maas and Henk Reiber (all IFF)



Vilfredo Raymo and Rovena Raymo (Simone Gatto SRL)



From left, Matevz Stimec (Eto/Frutarom), Sergey Belkov (Zelenye Linii) and David Baines (British Society of Flavourists)

Valencene isolate had a sweet orange/citrus juice character.

Nootkatone ex grapefruit had a grapefruit, juicy and woody character.

Orange peel extract was an ethanolic extract of European orange peel.

Dihydrocoumarin was almondlike, coumarinlike and appropriate for caramel profiles.

FD Copeland & Sons presented unusual flavor pairings featuring its natural materials. Highlights included **ginger** and **geranium** fudge; a **spearmint** and **dill** chew; tandoori dark chocolate comprising **ginger**, **cumin**, **cinnamon**, **bay** and **fenugreek**; a chocolate truffle with **coriander**; and a pectin jelly with **red thyme** and **red mandarin**.

Firmenich's 958176 methionyl butyrate was designed for low cost in use. The material possessed a rounding character and adds powerful, fruity, pineapple, mushroom and cheese notes to flavors. The ingredient is suited for pineapple juicy effects, and cheese, mushroom and fruit character.

958031 Mercaptobutanone adds body and juiciness to applications. The ingredient possessed powerful, meaty, egg and dairy notes appropriate for boiled note tonalities and, in very low dosages, dairy character.

938920 Dimethylheptenone featured a lamb and beef character, with oily and nut facets. In application it adds a fatty effect to dairy; acts as a key for savory, oily and meaty character; and, in lower dosages, brings a lactonic and nutty profile to dairy and nut flavors.

983546 Strawberry essence was fresh, green and fruity, with syrupy, fruity and creamy bottom notes.

959969 Honey Naturome was highly aromatic, floral, fresh and green, with honey and animalic bottom notes.

Frutarom F&F Ingredients' tamarind extract was woody, bittersweet, clean, dried fruitlike and jammy. On application, the material gives body to flavors.

Hibiscus extract FP24726 was sweet, full-bodied fruity, sweet berry and slightly acidic.

Orange peel bitter extract adds body and naturalness to applications and features peely, bitter, slightly jammy aspects.

Coffee espresso extract featured strong authentic coffee notes with a hint of bitterness and roasted nutty impact.

Kola nut extract adds body, rounds and imparts a slight spiciness to applications. Its character is spicy, peppery, woody and floral.

Lionel Hitchen Essential Oils' green mandarin oil fivefold FN13182 featured floral notes, intense fruity aspects and notes of green mandarin. The ingredient can be used in fragrances.

Ginger oil green IN13012 was fresh and lemony and featured a mouthwatering character suited to beverages and savory applications.

Cinnamon oleoresin FN13124 was rich, sweet and clean, making it appropriate for savory and sweet flavors.

Roast cumin oleoresin IN10834 had a full, sweet, cooked spice character ideal for use as a base in curry blends.

Jalapeno oleoresin FN11097 possessed a fresh, green, peppery aroma with a hot capsaicin kick ideal for use in Mexican and other spice blends.

Naturex's *Hinotes raspberry* was juicy and characteristic of fresh raspberry.

Coriander seed EZ-caps were fully water-soluble and imparted the character of coriander.

Kemfe possessed a flavoring and bitter masking activity that can improve, lift and balance flavors.

Szechuan pepper EZ-caps were spicy, pepperlike and lemony, with a slight numbing sensation.

Jambu extract, meanwhile, imparted a tingling effect.

Omega Ingredients' acetone natural, obtained from fermentation of molasses, acts as a lift for coffee flavors and is suited for fruit flavors such as apple and pear.

Ocimene ex palmarosa oil was sweet and tropical, fresh, fruity, herbal and metallic. The material is appropriate for mango flavors and can find use in fragrances.

Fusel oil ex apple is derived from apple fermentation for cider. The powerful, fruity, alcoholic ingredient is appropriate for apple and other fruit flavors, and EU-natural flavors.

Styrallyl acetate natural was sweet, fruity, clean, fresh and rhubarblike. The material is appropriate for rhubarb, peach, apricot, mango, gooseberry, pear and grape profiles.

Yuzu oil featured citrus, sweet, floral, orange, fresh and zesty facets. The material is appropriate for fruit flavors, particularly citrus.

Prova SA's vanilla extract, genuine Bourbon, possessed the whole taste of Madagascan *Vanilla plantifolia* beans.

Cocoa extract sourced from the Ivory Coast and Ghana, featured genuine cocoa taste and richness.

Coffee extract derived from *Coffea robusta* and *Coffea arabica* imparted a strong and balanced coffee taste.

Carob extract was roasted, dark and full-bodied.

Licorice extract, derived from an Iranian quality, was smooth and aromatic.

Riverside Aromatics' ethyl-3-methylthiopropionate, natural (FEMA# 3343), derived from fermentation of broccoli, possessed a sulfurous, tropical, pineapple and blueberry character.

Trimethylpyrazine, natural (FEMA# 3244), a mix of C-3 pyrazine isomers, was nutty, chocolatelike, cocoalike and nuttier than the synthetic counterpart.

2-Methyltetrahydrofuran-3-one, natural (FEMA# 3373), derived from coffee processing waste streams, was sweet, buttery, less caramellic than hydroxyl furanones, and featured a "sugar bowl effect" and crystal sweetness.

2-Isopropyl-4-methylthiazole, natural (FEMA# 3555) was peachy, green, tropical, fruity and less sulfurous than synthetic versions.

5-(6)-Decenoic acids (FEMA# 3742), which were nature identical, but not EU-natural, imparted a cooked/

burnt milk note preferred in markets such as the Far East, Middle East and Africa.

RC Treatt's jalapeno Treattarome 9816 was a natural material with all the flavor of the named material but none of the heat. The ingredient featured a fresh green pepper aroma, green earthy flavor and paprika top notes appropriate for salsas and alcoholic beverages.



Celine Laye and Jon Downard (FD Copeland)



From left, Christian Eberhardt, Nahal Bushri and Jean-Pierre De Mattos (all Mane)



Gabriela Gladisova and Radek Stanek (Trumf International)

Lanceolata extract imparted heat at low levels and featured pepper and spicy top notes.

Tropical key MG was a natural product with mango, tropical and green notes.

Citral orange can be used to round out orange and mandarin flavors. It features a sweet balance of lemon, lime and almondlike notes. It is recommended for use in trace amounts to modify citrus flavors such as orange and mandarin.

trans-2-Tetradecanal, natural, isolated from the leaves and stalks of coriander (*Coriandrum sativum*) featured intense, fatty, green herbal notes and an orange facet.

S&D Aroma/Azelis' elder flower CO₂ extract organic was fresh, refreshing and soft, with a typical elderflower aroma. The material is particularly useful in soft drinks.

Hot pepper oleoresin (*Pimenta officinalis*) was pimentolike and suited to chocolate and other sweet flavors, and savory applications.

Tonka bean oleoresin has use in both flavor and fragrance applications in which it imparts a caramellic, toffeelike and creamy character.

Vanilla Bourbon oleoresin featured a dark cocoa/chocolate note.

Vanilla tahitensis oleoresin 28X concentrate imparts a novel profile of this common flavor note.

Peppermint organic featured a clean, clear, refreshing mint note.

Simone Gatto's lemon oil sfumatrice featured a fresh note and was light and floral.



Conor O'Neill (Zest Aromatics), left, and Andrew Ward (Inn Orbit Srl)



From left, André Kohlenberg, Roman della Peruta and Peter Panitz (all Döhler)



From left, Silke Kalms, Stefen Lambrecht and Silke Hilmer (all Symrise)



From left, Rachel Fordham, Peter Dawson and Arthur Godfrey-Phillips (all Elixarome)



Ozgur Aridasir (Aroma Uden), left, and Femke Driessen (Fromatech)

Lemon recovery essence oil possessed a fresh and juicy note.

Blood orange oil was sweet, featuring a juicy note and facet of ripe fruit peel.

Yellow mandarin oil featured a unique note similar to the fresh fruit.

Organic bergamot oil possessed a unique, sweet, fruity peel note.

Symrise's **vinylguaiacol, natural**, was sweet, spicy, clovelike, smoked and phenolic.

Symcool natural was fresh, mild and long-lasting cooling, with a sweet menthol taste.

trans-2,cis-4-Ethyldecadienoate natural was juicy, ripe pearlike, sweet and fruity.

Limettol natural was limelike, citrusy, juicy, peely and fresh.

2-Propionyl-2-thiazoline featured popcorn, roasted, bread crust and cooked notes.

V. Mane Fils' clary sage and **thymol crystals** were featured in a sweet gum flavor profile. The clary sage was aromatic, floral, herbaceous and woody, while the thymol crystals imparted aromatic, herbaceous and camphorous notes.

Orris was featured in a sushi candy demo application, in which the material imparted woody, floral, green and fruity aspects.

Red seaweed Pure Jungle Essence was displayed in a potato chip demo. The material featured marine, mossy, woody, iodized, floral and herbal notes.

Methyl benzoate was featured in a demo marshmallow application, giving off a spicy, woody and medicinal impression.

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