2014 *World Perfumery Congress* Exhibition News & Notes

Photos and company news gathered from the exhibition floor.



he 2014 World Perfumery Congress exhibition provided a showcase for dozens of international ingredient suppliers and service providers to do business, network and announce new initiatives. Here, P & F provides a selection of announcements.

Agrumaria Corleone presented its organic and non-organic lemon, orange and mandarin essential oils, which were either cold-pressed or distilled. These included *conca d'oro*, a furocoumarin-free colorless lemon oil, and *conca d'oro* mandarin oil.

Al-Can Exports presented its aluminum bottle packaging expertise for the essential oil, flavor and fragrance industries. All bottles were U.N.-certified (X category) for transportation and storage of dangerous goods, and Drug Master File (DMF) 111 compliant. Al-Can exports to more than 37 countries worldwide and features high-tech production equipment and customization capabilities such as spray painting, logo embossing and lacquering.

Albert Vieille presented its Café Sublimé ingredient, a coffee extract produced in cooperation with a Salvadoran partner. The extract is based on *arabica* coffee, which comes from bushy shrubs growing at an altitude between 1,000 m and 1,500 m on the volcanic range south of El Salvador. Coffee cherries are brought to coffee-processing units with the beans dried in the sun and roasted. The resulting extract is obtained through additional processing and filtration to create an alcohol-soluble coffee ingredient that is rich and intense.

BASF presented aroma ingredients based on its citral value chain, including geraniol, citronellol, linalool and l-menthol. The company's citral is nature-identical to the main component of many essential oils like lemongrass, and is used for fresh-citrus and fruity notes in fragrances and flavors. Citronellol is used for a fresh, powerful and long-lasting rose fragrance, and is a valuable component for fresh-floral compounds. l-Menthol is



BASF exhibition

used for cool freshness in various products in oral care, body care, flavorings and pharmaceutical applications. The company recently announced the joint investment of about \$500 million with Petronas Chemicals Group in an integrated aroma ingredients complex in Kuantan, Malaysia. The first new plants of the complex are expected to come on-stream in 2016 and will create about 120 new employment opportunities.

Berjé introduced its Farm to Fragrance program, a traceability system for essential oils, which allows customers to track ingredients by batch number back to the distillery and the cultivation source. The system also allows for a more direct connection between perfumers and distillers by providing access to raw material data, farm practice and distillation techniques. The online interface provides a map of the growing region, the identities of farms involved in production, slideshows of distilleries and information on the raw material. The growing region information includes climatological data and botanical descriptions, while farm "biographies" include photos, location, hectare totals, growing practices, photos and more.

Biolandes presented marshmallow absolute (F1450), which is obtained from the dried roots of the marshmallow plant and has a mineral and metallic top note, with overtones of leather, which harmonizes well with juniper berry. Licorice roasted 70%/MPG (F9863) is extracted from roasted licorice roots, offering the aroma of grilled peanut with a spicy edge evocative of cashew nuts. Armoise Inco 100 (F0367) is obtained from the herbaceous Artemisia herba-alba shrub by extraction followed by molecular distillation to reveal a different facet of this plant. Its mild, menthol-like green notes evolve toward a fig leaf inflection, creating a syrupy effect reminiscent of barley water, with subtle spice touches of cinnamon bark. Ambreine (F0049) production has been revitalized by the start-up of Biolandes' new sustainable, eco-friendly gum labdanum extraction unit in Andalusia. This ingredient has unique facets of amber and leather, while the resin lends base notes an oilbanumlike quality with woody accents.

Contexa showcased its expertise in the engineering and production of automatic compounding machines for flavors and fragrances. The company presented Colibri, a volumetric dosing system for liquids with any physical properties, and Niagara, a robot capable of dosing bulk liquids at a rate of up to $15~\mathrm{m}^3$ per hour.

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Robertet exhibition.

DRT displayed ingredients produced via bio-based chemistry utilizing rosin and turpentine extracted from pine, including Sylvamber, which is powerful, woody, cedrous, ambery, warm and has strong tenacity. Intended for fine fragrance, personal care and air care, the ingredient can play a role in rounded and long-lasting perfumes. The company is planning to launch a biomass power station, which is expected to substitute fossil energy consumption, leading to a zero- CO_2 -emission site for its production. DRT is also constructing "a new platform" in the southeast United States for the "management of raw materials."

Diffusions Aromatiques highlighted its expertise in natural ingredients (including CO_2 extracts), organic products and aroma chemical raw materials. Serving the flavor, fragrance and cosmetics industry, the company underscored its global sourcing network and contacts with quality producers.

Du Bois, in conjunction with Asia Plantation Capital Distilleries, presented pure oud oil, which is produced from sustainable plantations. There has been increasing demand for the product, which has traditional and even spiritual connotations, while also offering olfactory value for haute perfumery. Oud oil has a near mythical status and fast-growing demand from the cosmetics industry. The oud oil on display is produced under "consistent quality and standards" and has softer tones and less of an animalic note compared to traditional types. Each 1 kg bottle is sealed at the source, and the age and planting date of the trees recorded to maximize traceability. Asia Plantation Capital plants at least 20 new trees for every oud tree harvested, boosting sustainability. Each oil comes with CITES certification, "guaranteeing the sustainability of the oil produced and ensuring it is legal." This refined version of oud oil was produced as part of a "soil to oil" program that involves academics and industrial production-line experts. The company notes, "Every stage of the process from initial plantation stock and land selection, to the inoculation techniques and end processing systems have been subjected to rigorous scientific analyses and review."

In addition to its ingredients such as amyl and methyl cinnamic aldehyde, benzaldehyde, benzyl alcohol, benzyl benzoate, and C6, C8 and C10 linear aldehydes, **Emerald Kalama Chemical** showcased its new launch, methyl benzoate. The ingredient reportedly has a "sweet, heady floral odor reminiscent of tropical flower varieties—with some balsamic or spicy undertones," and is based on non-phthalate benzoate chemistry. The material is intended for use in personal care (including shampoos, shower products, face/neck care products, body care, liquid soaps, hair colorants and cosmetics, and mouthwash), fragrance, and food



Firmenich exhibition.

and beverage applications, and for a base in fine fragrances such as those featuring tropical ylang-ylang flower notes.

Encapsys presented its chemistry solutions for the fragrance industry. The company works with fragrance providers to offer performance solutions designed around its EnSensa microencapsulation technology.

Along with Firascone (olfactively the closest non-sensitizing ingredient to the rose ketones) and Z11 (a dry and elegant precious wood), Firmenich launched its trademarked Clearwood ingredient at the 2014 WPC. The material is created via fermentation of sugarcane, producing a material that is patchoulol-rich, with woody and patchouli notes. The ingredient's development is aligned with the company's focus on environmental impact, says Julien Firmenich, particularly as no volatile solvent is required, while the feedstock is renewable and produced in a region benefitting from heavy rainfall. Meanwhile, the biotechnology process involves a simple, calibrated fermentation not unlike beer brewing. The result is an affordable price structure and an efficient production process. Firmenich adds that the launch of this ingredient is "just the beginning" for biotech ingredients. In the future, he says, this platform will allow further innovation on existing ingredients. In addition, new/novel chemicals will be produced for the perfumer's palette.

While Firmenich says the Clearwood launch is "an important and encouraging milestone" for the company's biotechnology platform, he adds that the organization remains committed to "traditional" chemistry, which will continue to be a source of innovation, perhaps in conjunction with biotechnologically produced materials.

Firmenich perfumer Wessel-Jan Kos describes Clearwood's profile as, "Enlightening and offering a creamy warmth of



Takasago exhibition.



Givaudan exhibition.

amber ... with dark woody notes." In formulations, Clearwood can deliver richness for modern chypres that eschew patchouli's traditional "dirty" notes. Kos adds, "When used as a building block, Clearwood brings a soft creaminess reminiscent of natural sandalwood."

In addition to its ingredient offerings, **Givaudan** announced the launch of the Givaudan Foundation, an independent non-profit organization focusing on three main areas: communities at source (support of local communities from which Givaudan sources natural ingredients), blindness and family nutrition. Matthias Währen, Givaudan's CFO, will be president of the group's board of trustees. The foundation has already launched several projects in Haiti, Laos, Madagascar and Comoros Islands.

Global Essence presented its ranges of fragrance raw materials, including absolutes, English essential oils and native extracts.

IFF-LMR presented contemporary takes on classic ingredients, including LMR Rose Ultimate Extract produced with an updated extraction process, netting a material that has notes of fruit, honey, tobacco and rose; LMR Rose Essential Low ME, which has a low methyl eugenol content; LMR Cinnamon Essential, which is spicy and floral, the result of a new extraction process; and LMR ylang absolute, described as a "radiant and warm solar floral, with tiare flower accents," which features a salicylate/salty note to boost greenness in formulations.

Indesso Aroma presented Florinol, a natural aroma chemical that gives more than 99% mosquito repellent efficacy over eight hours (applied in hand/body lotion, tested by an independent laboratory). Florinol is a non-allergenic substance with



IFF exhibition.



Mane exhibition.

floral, green and sweet notes. The ingredient addresses the need for leave-on skincare to address anthropod insect bites, which, according to World Health Organization statistics, kill one person every 30 seconds. There are various essential oils containing molecules that have such efficacy.

Jiangsu presented its lily aldehyde, a colorless to pale yellow liquid with a sweet and fresh scent of lily. Jiangsu was founded in 2011 and manufactures synthetic fragrance and flavor ingredients for the cosmetics, personal care, soap, detergent and toiletry markets. The company recently received ISO 9001 and kosher certificates.

Nactis, through its **Synarome** brand, launched new products inspired by Deauville. Taking a cue from the seaside town's hallmarks—the sea, Norman countryside and horse races these new creations boosted the imagination of the brand's clients, functional perfumery and fine fragrance perfumers. The company's anisaldehyde diethyl acetal had a delicate, mild floral-sweet odor that was hawthornlike, with almond and cherry nuances, on a sweet-soft balsamic and powdery background. Algenone white was a modern interpretation of algenone that was more transparent and musky than the original. Vetiverol BM was an earthy and natural, fine and elegant vetiver note. p-Cresyl caprylate had an intense animalic and fur note with green and hay aspects. Cuir HF is a harmonious, classic leather scent with a fresh citrus (bergamot) top note fused with a floral (orris and violet) spicy head, rounded off by precious woods and musky tones. Cuir de Russie was a strong and powerful classical leather material that began with aldehydes married to an orange blossom heart.

O'Laughlin presented its latest additions to its expanding product line, including Cyclemal, which utilizes a new process to achieve improved performance at a lower cost, and floral anise forte, which gives a more cost-effective option compared to conventional offerings, and raspberry ketal, which is no longer cost-prohibitive.

Organica Aromatics presented 14 new products, including Geosmin, Galbutenon, Iris OA, Strawberone, IBQ and Floral Dec. The company is a niche, research-driven, specialty aroma ingredients manufacturer based out of Bangalore, India, and is a subsidiary of Sabinsa Corp. USA.

To highlight 100 years of history in the flavor and fragrance industry, **PFW** highlighted a number of products, including Emeraldine and a sneak preview of Product CF, a new, unique aroma chemical soon to enter the fragrance ingredients market. The company also presented isojasmone and cyclomyral, along

with more recent introductions such as sagecete. PFW presented a tropical showcase off the show floor, which included a focus on Tropicate, which works in many product categories and across a multitude of fragrance directions.

Payan Bertrand presented its HTC range of high-temperature dry distillations of concretes, gums and balsams. These traditional products were enhanced using technology to comply with regulations to reduce PAH and BTEX contents and offer a colorless and stable liquid form that is highly soluble. The company's Terima Kasih Indonesia Specialties include a new colorless patchouli quality from Aceh's mountains in Indonesia, a low-pressure java vetiverol fraction, which enhances powdery orris aspects and fresh sparkling accents, and benzoin Sumatra colorless, which results from a strict selection of benzoin white tears. In addition, Payan Bertrand presented its new natural blend range, including jasmine and neroli.

Primechem presented its range of synthetic and natural lactones. Primechem's most recent product launches include *cis*-jasmone, dihydrojasmone, lactone of *cis*-jasmone, methyl-2-nonenoate and rose oxide (by photo-oxidation).

Provence Naturals highlighted sustainable essential oils, particularly lavender, lavandin and clary sage from France. The materials are produced in partnership with Comité Interprofessionnel des Huiles Essentielles Françaises and FranceAgriMer.

Safisis, a subsidiary of the Lesaffre group, presented its Safrom (production of natural aromatic molecules by fermentation) and Saftoll (customized fermentation service) molecules, which are natural in accordance with EU-(1334/2008) an US- (FDA 101.22(3)) guidelines. Safisis has built a new distillation workshop specializing in natural vanillin downstream processing, with the first production starting this summer.

SensaPeel displayed its samplers for essential oils, aromatic chemicals and fragrance materials that utilize a medium that is malleable and publishable, and which allows potential customers to interact with manufacturers' products. Sealed between two layers of film, the fragrance inside remains unharmed until the film is peeled back and the fragrance released, yielding a personal and faithful sample of the fragrance.

Sud Graphic presented its expertise in manufacturing blotters, smelling strips and by-products for the cosmetic and perfume industry. Sud Graphic is one of the first companies to obtain both Programme for the Endorsement of Forest Certification (PEFC) and Forest Stewardship Council (FSC) certificates.



PFW exhibition.



Symrise exhibition.

Symrise displayed Ambrocenide Cryst, described as "a powerful ambery, warm woody aroma molecule that has the crystalline quality of Ambrocenide"; Mysore Acetate, which had floral, fruity, violet and woody notes, which can be used in compositions to boost fruit notes or deliver "body" to violetfloral compositions; the spicy Poivrol, with notes of pepper, laurel leaf and wood; and Vetival, which has notes of vetiver, wood, citrus and floralcy, which can be used for "radiant, grapefruity" top notes, as well as "soft ionic-floralcy" for vetiver compositions.

TFS launched its first commercial supply of plantation-grown sandalwood. Santalol oil is produced from the *Santalum album* trees grown naturally in plantations in Australia's tropical north. TFS has grown, processed and distilled the oil, creating a new

level of transparency in the global sandal-wood market, according to the company, where ongoing Indian export bans and declining wild supplies have led to wide-spread adulteration and poaching. Santalum album is now nearing extinction in the wild. TFS manages the world's largest area of S. album plantations and, in 2014, completed its first commercial harvests of about 15,000 trees. TFS recently announced two major agreements with a global pharmaceutical company, which include the licensing of dermatology products containing TFS plantation-grown Indian sandalwood oil.

Takasago introduced optically active fragrance ingredients derived from renewable myrcene, including Levocitrile. The company's Thesaron is manufactured using renewable bioethanol, and has a 100% biobased index, according to the company. This approach contrasts with conventional rose ketones, which are produced with petroleum feedstocks and can be sensitizing on skin. (Read more about the company's activities with Amyris on Page 34.)

Ventós presented labdanum coeur, which has a strong odor of Cistus landaniferus obtained using a short-path distiller. The company's patchouli cristallisé is obtained by concentration of patchouli oil and subsequent refinement by molecular distillation. The material comprises 80% patchouli alcohols and "goes straight into the undertones of patchouli oil, avoiding the top earthy and herbaceous notes," according to the company. Ventós cedarwood Atlas Supra maintains the essence of the original oil, but increases the balsamic and oriental top notes, "giving a powerful product with a luxurious tenacity." Ventós also displayed Mediterranean pine obtained by steam distillation of *Pinus halepensis* splinters, giving an authentic pine odor.

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