

The Last Word: CSA/SFC Meeting Explores Sensory Innovation

Chefs are the educators in today's food culture, said Marie Wright, vice president and chief global flavorist at Wild Flavors, during the recent joint meeting of the Society of Flavor Chemists and Chemical Sources Association at New York's Midtown Executive Club.

For instance, Danish chef René Redzepi is currently pushing the culinary envelope with humble, obscure and outright bizarre foods and flavor combinations. Redzepi serves all manner of avant-garde dishes at his restaurant, Noma, including black-currant and roses, moss and cep mushrooms, monkfish liver and milk, chestnuts and trout roe, and burnt leek. Meanwhile, food trucks across the United States and around the world are providing consumers an affordable way to experiment with countless ethnic cuisines.

Wright, who provided an overview of the foodie landscape, noted that today's leading trends include locally sourced ingredients, gluten-free offerings for non-celiac sufferers, healthy kids' meals, ethnic foods and pickling (a recent Walkers potato chip was released in a "pickled onion" flavor). She also outlined the innovations occurring in the alcohol realm, including micro distilleries (using local botanicals), barrel-aged cocktails with complex levels of flavors, regional and ethnic cocktails, unfiltered vodka, and specialized bitters and tonics. At the same time, a range of innovative companies are producing highly culinary fast food, showing that in all categories "freshness drives preference." Consumer consciousness about waste has led to new ways to view sustainability. Wright noted that Daily Table, a project by former Trader Joe's president Doug Rauch, will sell expired food as a first step in redressing the United States' estimated \$165 billion of annual food waste. At the same time, nose-to-tail restaurant concepts are removing the stigma of using the whole animal in menus.

Wright presented the attendees with a range of demos that translated these trends. Hot cilantro limeade was made with *trans*-2 dodecenal (FEMA# 2402; CAS# 20407-84-5) 10%. A pineapple garden mint soda included allyl caproate (FEMA# 2032; CAS# 123-68-2) and spearmint native oil. A cold-brew coffee contained oak distillate and vanilla distillate. Finally,

the talk concluded with a black truffle vodka demo containing methyl cyclopentenolone (FEMA# 2700; CAS# 765-70-8).

Next, Cathianne Leonardi, senior flavorist at Allen Flavors, discussed rose notes in flavors. Roses for the production of aromatic materials—*Rosa damascena* and *Rosa centifolia*—are commercially grown in Turkey, Egypt, Bulgaria and Morocco and can be used to produce rose water, rose oil, rose concrete and rose absolute. Leonardi, who derived her inspiration from the 2011 Alexander McQueen "Savage Beauty" fashion exhibit, explained that rose notes are widely applied in teas and other products. She went on to describe how rose notes can be paired with chemically similar materials such as citronellol for lemon, damascenone for apple and rose oxide for lychee.

Following Leonardi's cross-disciplinary outlook on flavor, Ruhil Patil, senior perfumer, fine fragrance, IFF, discussed how flavors are increasingly featured in fragrances to build appeal with consumers. Bath & Body Works (BBW), for instance has launched candles with gelato and cupcake profiles. Axe *Dark Temptation* broke olfactory rules by applying an improbable chocolate profile to a deodorant product. Meanwhile, in fine fragrance, *Sean John I Am King* includes a champagne accord, and *Acqua di Giò* includes a brown sugar facet.

When translating flavors to perfumes, perfumers find they have a smaller palette, said Patil. It is often difficult to find one-to-one replacements for key products such as liquid smoke. Showing a chart of basic formulas, the perfumer outlined the following key substitutions in a basic flavor to fragrance translation:

- strawberry essence for ethyl phenyl glycidate
- hexanol kosher for hexanol
- strawberry essence for aldehyde C16 + ethyl phenyl glycidate
- synthetic vanillin for natural vanillin
- 2-methyltetrahydrofuran-3-one for cyclotene
- heliotropin + chocolate note for vanilla extract borubon 2x

At the same time, there are unique color and stability issues, such as vanilla turning candles, shampoos and lotions pink or brown. Then there are the toxicology and cost-in-use hurdles. Patil added that when formulating one should not make the flavor reference overly childlike, "sticky" or foodlike, artificial or cheap-smelling. When done right, flavor-inspired scents offer points of differentiation.

Patil said that flavorists can teach perfumers a lot about how they use materials in order to provide a strong sensory payoff for consumers.

For future meetings, visit www.perfumerflavorist.com/events/calendar/.



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