Characterizing terpenes and other natural products in CBD hemp

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Terpenes:
Terpenes are fragrant compounds produced by the hemp plant for defense against insects and pathogens that give hemp its distinctive smell and taste. In addition to playing a protective role in plant defense, these compounds are important to consumers as they can interact with CBD and alter flavor profiles.

Production and Importance:
Plant variety, health, production method, stage and pathogen infection influence terpene production. We are conducting trials to evaluate different stresses and production methods on terpene profiles and the profiles of other natural products in hemp.

Testing Procedure and Assessment:
Our lab uses chromatography and mass spectrometry to identify and quantify amounts of terpenes and other natural products in hemp. We can do this by extracting chemicals directly from the leaves or by sampling fragrance profiles by collecting and analyzing smells given off by the plant.
<table>
<thead>
<tr>
<th>Terpene</th>
<th>Aroma</th>
<th>Vaporizes at</th>
<th>Found in</th>
<th>Strains</th>
</tr>
</thead>
<tbody>
<tr>
<td>PNE (Pinene)</td>
<td>Pine</td>
<td>311°F (155°C)</td>
<td>Pine Needles, Rosemary, Basil, Parsley, Dill</td>
<td>Indica (Purple Kush), Sativa (Bay Dream), Hybrid (Ak-49)</td>
</tr>
<tr>
<td>MYR (Myrcene)</td>
<td>Cloves, Earthy, Herbal</td>
<td>332°F (167°C)</td>
<td>Mango, Lemongrass, Thyme, Hops</td>
<td>Indica (Gdp Granddaddy Purple), Sativa (Am Arora), Hybrid (Tw Trainer's Rock)</td>
</tr>
<tr>
<td>LME (Limonene)</td>
<td>Citrus</td>
<td>348°F (176°C)</td>
<td>Fruit Rinds, Rosemary, Juniper, Peppermint</td>
<td>Indica (Hk Hindu Kush), Sativa (Lmg Lemon G), Hybrid (Stb University Banana)</td>
</tr>
<tr>
<td>CYE (Caryophyllene)</td>
<td>Pepper, Spicy, Woody, Cloves</td>
<td>266°F (130°C)</td>
<td>Black Pepper, Cloves, Cinnamon</td>
<td>Hybrid (Fog Fire OG), Hybrid (Gg4 GG4), Hybrid (Gsc Gsc)</td>
</tr>
<tr>
<td>LNL (Linalool)</td>
<td>Floral</td>
<td>388°F (198°C)</td>
<td>Lavender</td>
<td>Indica (Kos Kosher Kush), Indica (Rom Rummage), Hybrid (Sk Sour Kush)</td>
</tr>
<tr>
<td>HUM (Humulene)</td>
<td>Woody, Earthy</td>
<td>222°F (106°C)</td>
<td>Hops, Coriander, Cloves, Basil</td>
<td>Indica (Bcg Black Cherry GG), Indica (Ds Death Star), Hybrid (Gsc Gsc)</td>
</tr>
<tr>
<td>OCM (OCimene)</td>
<td>Sweet, Herbal, Woody</td>
<td>122°F (50°C)</td>
<td>Mint, Parsley, Pepper, Basil, Mangoes, Orchids, Kumquats</td>
<td>Indica (Sen Seni Star), Sativa (Dp Durban Poison), Hybrid (Svb Silver Bubble)</td>
</tr>
<tr>
<td>TPE (Terpinolene)</td>
<td>Pine, Floral, Herbal</td>
<td>366°F (186°C)</td>
<td>Nutmeg, Tea Tree, Conifers, Apples, Cumin, Lilacs</td>
<td>Hybrid (Dt Dutch Treat), Sativa (Gth Ghost Train Head), Hybrid (Ago Agent Orange)</td>
</tr>
</tbody>
</table>

Courtesy: Leafly