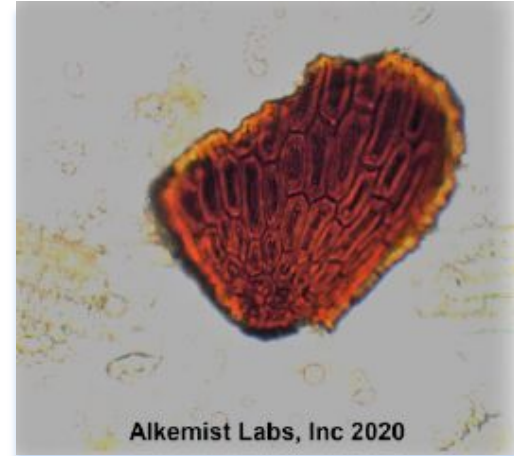


Chemistry

Vanillin, a natural organic compound, is primarily responsible for the unique and popularized smell and flavor of vanilla.



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Microscopy

Above is a vanilla seed coat fragment observed under a compound microscope. This fragment is one of the characteristics of vanilla and is used as a means to identify vanilla using microscopy.

Pharmacology

V. planifolia has high potential for pharmacological applications since there no toxic affect to the liver and blood cells even when intaking *V. planifolia* in high-concentration. The vanillin in vanilla also has been through extensive research under multiple medical applications such as cancer, neuroprotection, antifungal, antibacterial, and therapeutic treatments.



Vanilla planifolia

Vanilla



Cultivation/Preparation

Madagascar is the largest producer of natural vanilla estimating 75% of the world's production followed by Indonesia, China, and Mexico. *V. planifolia* is cultivated in a tropical environment. The pods are harvested after 6 to 8 months after fertilization, and then dried, and cured to produce the vanilla flavor and scent. The pods are commercially used whole, or split to extract the seeds and infused in a variety of commercial products.

Botany

V. planifolia is a type of spice from orchids and a tropical climbing vine that can reach a length of over 20 meters high. The flowers are greenish yellow that produces a faint vanilla scent. The pleasant vanilla fragrance comes from the developed pods, which are the vanilla "beans", and the numerous black seeds inside the fruit.

History/Traditional Use

V. planifolia is a species native to Southern Mexico and Central America. It was kept secret by the Aztecs and the Mayas until the invasion of the Spanish. It was used primarily for flavoring foods and beverages, such as chocolate. Vanilla was then introduced to Europe by the Spanish in the 16th century. The French introduced vanilla to Madagascar in the 19th century.



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