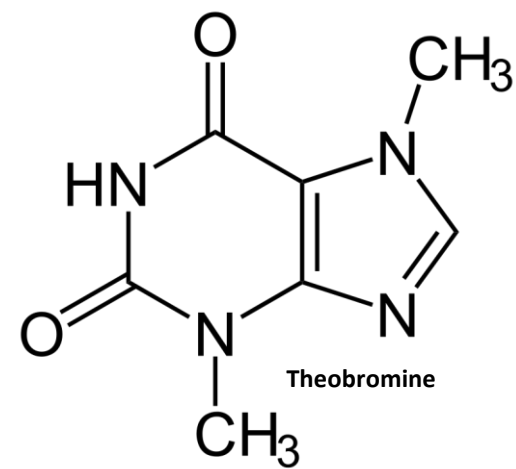
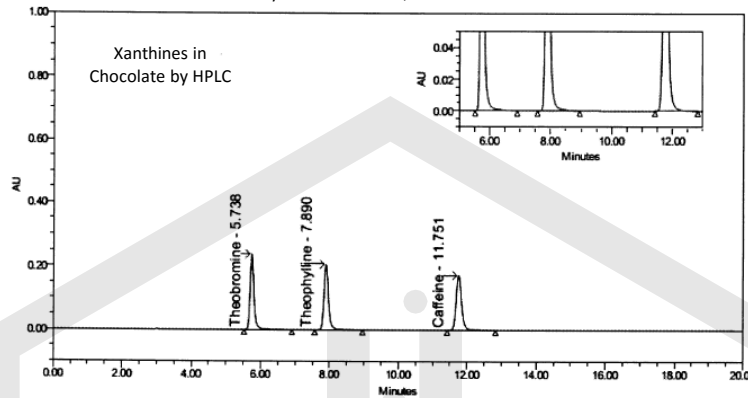




## Plant of the Month

By Jonathan Crellin, Alkemist Labs



### Chemistry

The most active component in chocolate is theobromine, a xanthine alkaloid similar to caffeine. Theobromine can be toxic in high doses, especially to domestic animals who metabolize the chemical more slowly than humans.

# Chocolate

## *Theobroma cacao*



### Sales

Manufacturing: Not in top 40  
Consumer: Not in top 20

### Botany/Preparation

Theobroma cacao is a small tree native to tropical regions. The fruit of the tree are pods filled with seeds known as cocoa beans. The beans are fermented, dried, roasted, and crushed into cocoa powder. The beans can also be pressed into a liquid mass which contains up to 50% cocoa butter. This can further be blended with sugar, milk, and flavorings to create modern consumer chocolate.



### Pharmacology

Theobromine is a diuretic and a mild stimulant which dilates blood vessels and can be used to treat high blood pressure. In the human body, theobromine has a half life of 6-10 hours. Recently, the polyphenols in chocolate have been generously praised as being potent anti-oxidants that may prevent degenerative diseases. Despite popular belief, chocolate addiction and use as an aphrodisiac have not been scientifically proven.

### History/Traditional Use

Use of the Theobroma cacao plant dates back 3000 years. Cultivation originated in the Yucatan area of Mexico where it was used as drink by the Aztecs and Maya. The valuable plant was seen as a status symbol, and was mostly drank by the wealthy and royals. The beans even became widely traded as money. Spanish explorers introduced chocolate to Europe in 1500. Despite being native to Central America, production spread to West Africa where over 70% of chocolate comes from today.



## References

1. <https://unitproj.library.ucla.edu/biomed/spice/index.cfm?displayID=4>
2. <http://www.indepthinfo.com/chocolate/>
3. [http://www.merckvetmanual.com/mvm/toxicology/food\\_hazards/chocolate.html](http://www.merckvetmanual.com/mvm/toxicology/food_hazards/chocolate.html)
4. <http://chemistry.about.com/od/factsstructures/a/theobromine-chemistry.htm>
5. <http://www.kew.org/science-conservation/plants-fungi/theobroma-cacao-cocoa-tree>