



MEDICINAL PLANTS OF GUATEMALA

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Investigación y edición FLAAR Mesoamérica



PLANTS vs. PILLS

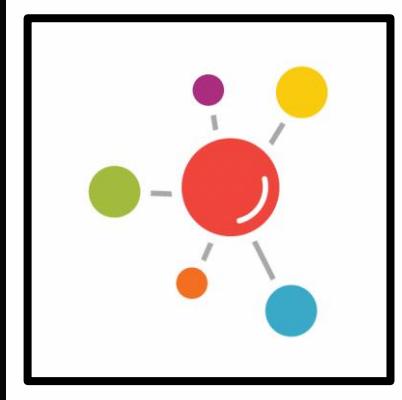


ALOE VERA

Aloe vera



SECONDARY METABOLITES AND ANTIOXIDANTS



PREPARATION METHODS

AND EXTRACTION



BASIL

Ocimum campechianum

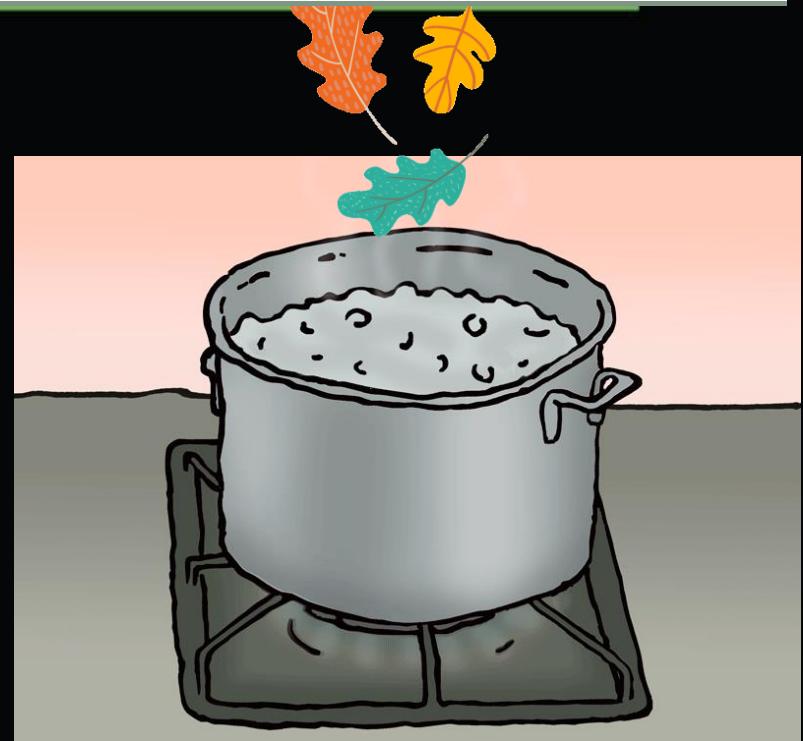


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INFUSIONS AND

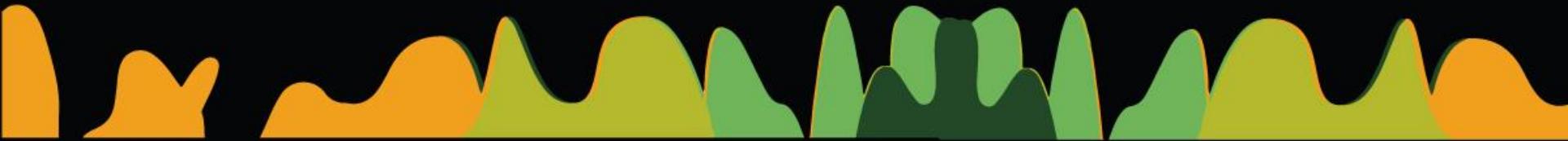
DECOCTIONS



INCENSE THERAPY



Therapy with
volatile ailments



TINCTURE



CATAPLASM

1.- Macerate with alcohol

2.- Place over a bandage

3.- Cover with another bandage



Fuente de imagen: Wikihow, 2010

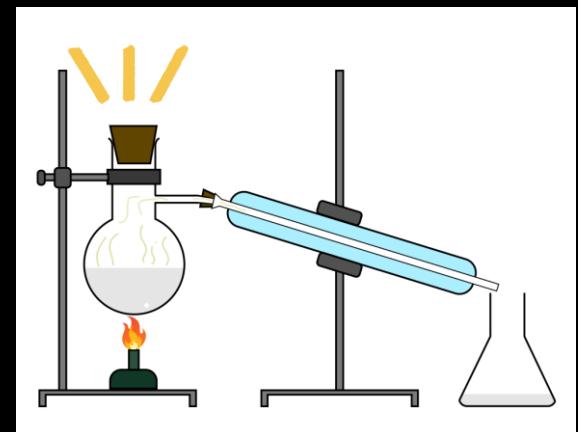


Fuente de imagen: Wikihow, 2010



Fuente de imagen: Wikihow, 2010

EXTRACTS AND ESSENTIAL OILS





NATIVE FLORA * USED TRADITIONALLY



MAYAN MEDICINE AND THE GIFT OF HEALING

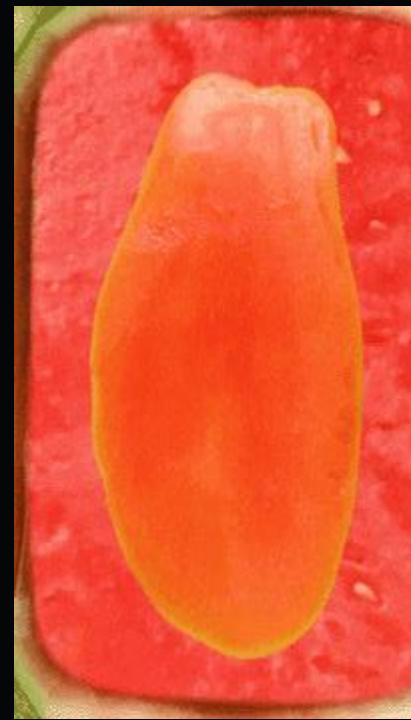


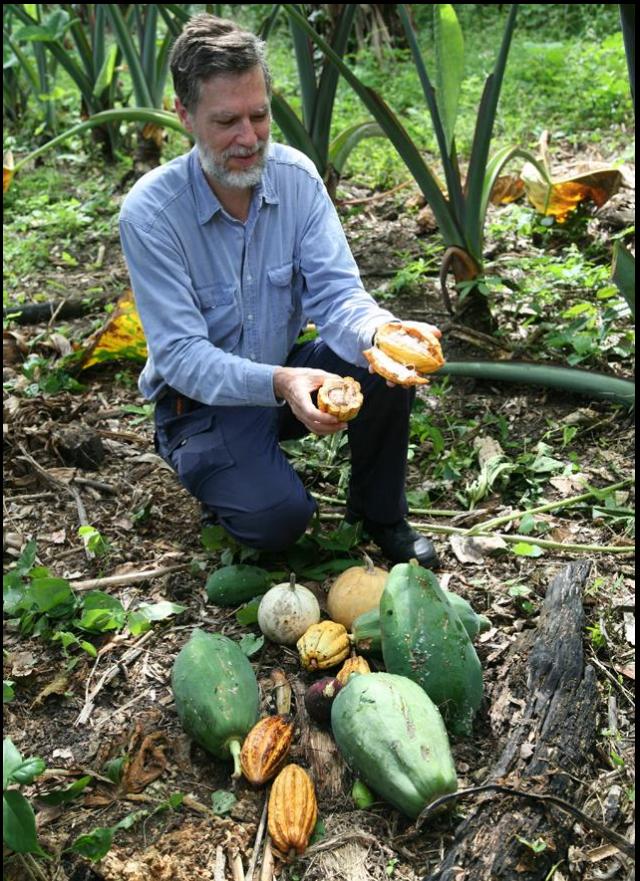
Papayaceae.



PAPAYA

Carica papaya





Dr Hellmuth with several species that fruit from the trunk: several papaya, several cacao pods and calabash (gourd tree).



Papaya (*Carica papaya*) flower at FLAAR office,
FLAAR Photo Archive

Neurolaena lobata

JACKASS BITTERS





BUTTERFLY BUSH

Buddleja americana



PLANTS THAT WERE INTRODUCED INTO THE CULTURE



GARLIC

Allium sativum



LEMON AND ORANGE

Citrus limon & sinensis



ROSEMARY

Rosmarinus officinalis

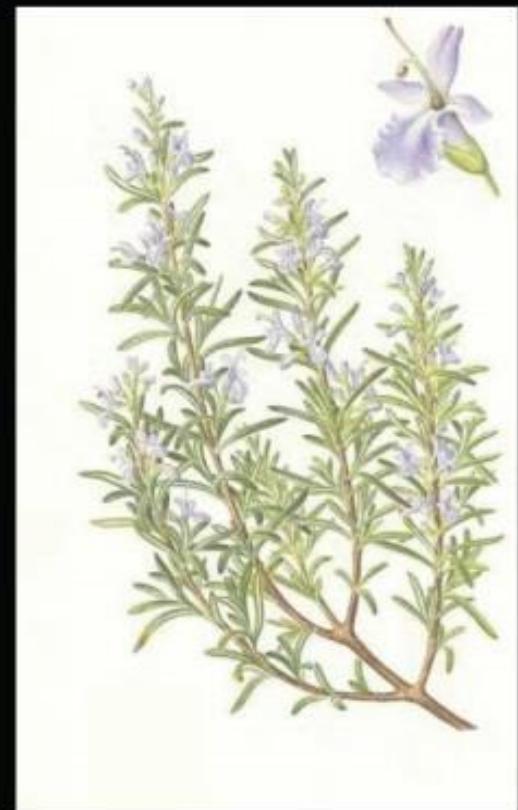


Table 1

Modern and historical medicinal uses of Rosemary (*Rosmarinus officinalis*) (data based on De Cleene and Lejeune, 2003; Aguilar et al., 1994; Argueta, 1994; Pardo-de-Santayana et al., 2006)

Categories of use	Mexican ethnopharmacology	Spanish ethnopharmacology	Historical ancient sources
Skeleto-muscular disorders	Against rheumatic, arthritic and traumatic muscular, joints and bone pains	Against rheumatic, traumatic, sciatic or other muscular, bones and joints pains. Usually as an anti-inflammatory and/or analgesic	To move benumbed joints, or extremities
Gastrointestinal disorders	Against colic and intestinal parasites, haemorrhoids	To stimulate appetite, to help digestion and against stomach pain and dyspepsia, ulcer, diarrhoea, jaundice and liver disorders, as a cholagogue and choleric, flatulence and bloating	To help digestion and against flatulence and bloating, against liver disorders
Skin disorders	To heal wounds, against skin infections, hair loss and dandruff	Against hair loss, emollient in boil and grains, as antiseptic, anti-infectious in wounds	To heal wounds, ulcers, gangrene, scabies and as a skin cleanser
Respiratory disorders	Against coughs, colds and catarrhs, bronchitis, and whooping cough	Against asthma, coughs, colds and catarrhs, bronchitis, pneumonia	Against coughs, colds, catarrhs, tuberculosis
Circulatory disorders	Against heart ache, varicose veins, weakness	To enhance blood circulation, and against cholesterol, as cardiotonic, antihypertensive, and blood depurative, tonic against anemia and weakness	Tonic, against weakness, sleepiness, as a blood purifier
Nervous system disorders	Against headaches, epilepsy	Sedative and relaxant, against depression and headaches	To enhance memory, to recover speech, hysterical attacks, epilepsy
Sense disorders	"Enfriamiento de ojos"		To enhance and procure a clear sight
Gynaecological disorders	For retaining placenta, as a post partum remedy, against vaginal infections, to enhance fertility and avoid abortion		To enhance menstrual flow
Other	Cultural disorders such as "dolor de aire", "susto", "mal de aire", "caída de mollera"		Against pest and to expel pestilence, to freshen breath, for toothache, jaundice, diuretic

Cough Syrup

- 2 tbsp. ginger
- 3 garlic cloves
- 2 tbsp. dry oregano
- 1 tbsp. lemongrass
- handfull of anise seeds
- 2 cups water
- 1 cup brown sugar

1. Boil water
2. Add powdered ingredients

-Night Syrup: add wild passionflower,
chamomile and a bit of rum

Garlic & Jackass bitters Tincture

6 Garlic cloves

- a handful of *Neurolema lobata*
(Jackass bitters)

1 Bottle of Rum

1. Mix all the ingredients inside the
Rum bottle

2. Let the tincture rest away from the
sun for at least 2 days

3. Take 2 tablespoons of the Tincture
with Lemon and Honey



NATIVE NATURAL REMEDIES INVESTIGATED BY SCIENCE



BAY LEAF

Litsea guatemalensis





Passiflora foetida at Ecolodge El Sombrero,
Yaxha. Photo by David Arrivillaga

STINKING PASSIONFLOWER

Passiflora foetida

COPAL



BURSERA SIMARUMBA



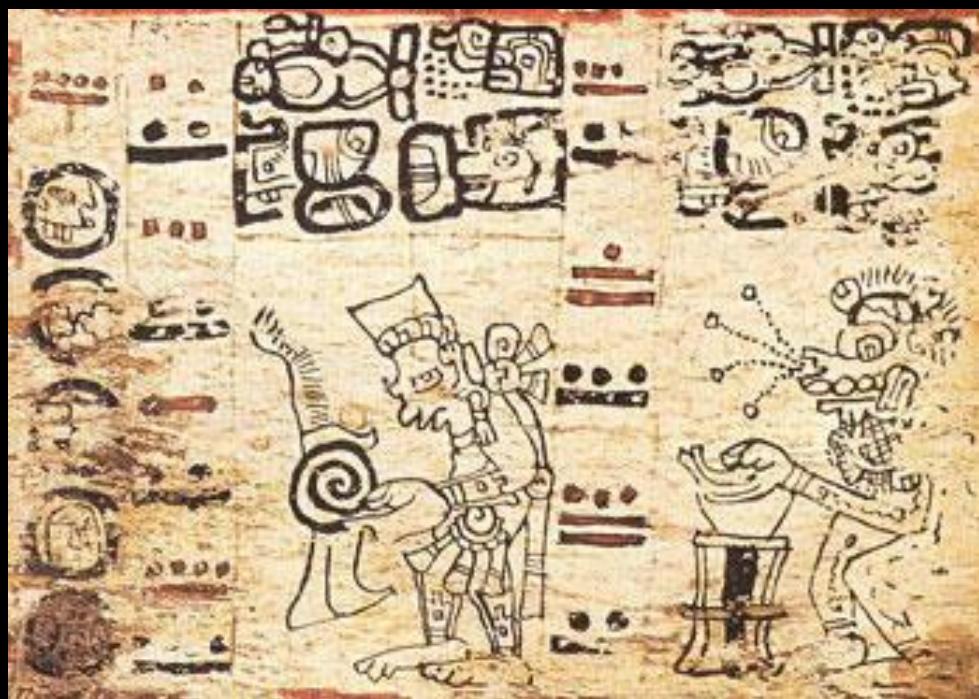
Harvesting copal pom Maya incense, El Portal, Semuc Champey, Alta Verapaz.

PROTIUM COPAL

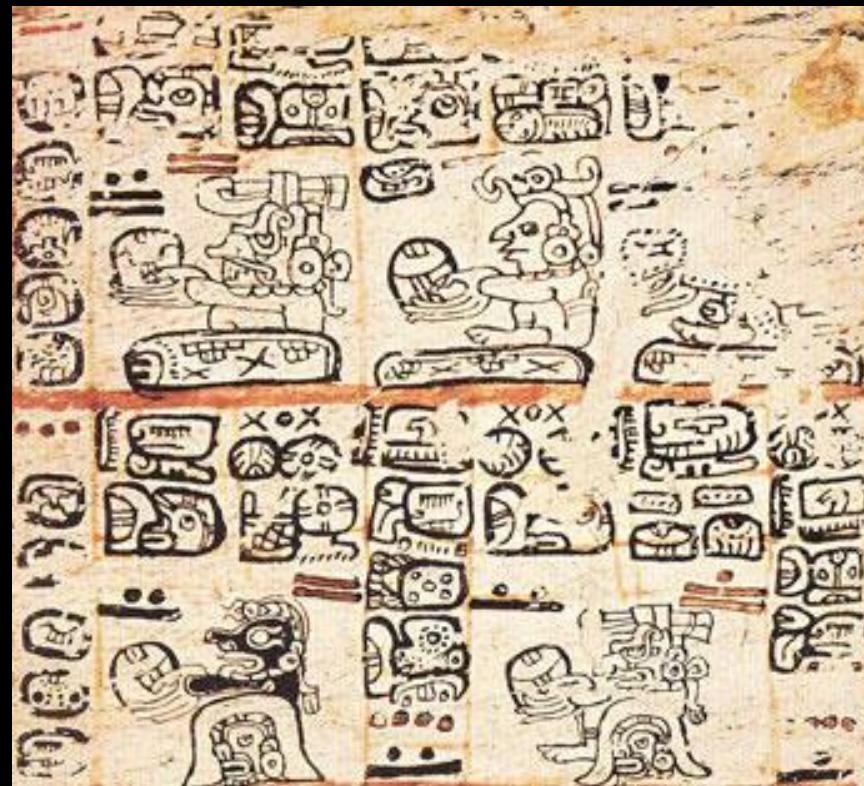


Copal Inciense, pom (*Protium copal*), photographed by Alen Bubanja in Semuc Champey area.

POPOL VUH



Ofrendas de hule y de copal (derecha)
Códice Madrid, pág. 83, fragmento



Ofrendas de copal. *Códice Madrid*, pág. 99,
fragmento

BIBLIOGRAPHY

1. Arvigo, R., & Epstein, N. (2001). *Rainforest Home Remedies*. HarperCollins.
2. Case, R. J., Tucker, A. O., Maciarello, M. J., & Wheeler, K. A. (2003). Chemistry and Ethnobotany of Commercial Incense Copals, Copal Blanco, Copal Oro, and Copal Negro, of North America. *Economic Botany*, 57(2), 189-202. [https://link.springer.com/article/10.1663/0013-0001\(2003\)057\[0189:CAEOCI\]2.0.CO;2](https://link.springer.com/article/10.1663/0013-0001(2003)057[0189:CAEOCI]2.0.CO;2)
3. FLAAR Mesoamérica. (2008, junio). *FLAAR continues decades long interest in Mayan ethnobotany as related to iconography*. Maya Archeology. https://www.maya-archaeology.org/pre-Columbian_Mesoamerican_Mayan_ethnobotany_Mayan_iconography_archaeology_anthropology_research/sacred_caves_cacao_ecotourism_Mucbilha_Alta_Verapaz_Chisec_Coban.php

4. FLAAR Mesoamerica. (2020). *Mayan ethnobotany, agriculture, crops, foods, sacred plants, flowers, trees of Guatemala, Belize, Mexico, and Honduras*. - [maya-ethnobotany.org](http://www.maya-ethnobotany.org). Maya Ethnobotany. <http://www.maya-ethnobotany.org/>
5. Gigliarelli, G., Becerra, J., Curini, M., & Marcotullio, M. (2015). Chemical Composition and Biological Activities of Fragrant Mexican Copal (*Bursera* spp.). *Molecules*, 20(12), 22383-22394.
https://www.researchgate.net/publication/286776270_Chemical_Composition_and_Biological_Activities_of_Fragrant_Mexican_Copal_Bursera_spp
6. Harrison, P. D., & Turner, B. L. (1978). *Pre-Hispanic Maya Agriculture*. Amsterdam University Press.
7. Heinrich, M., Kufer, J., Leonti, M., & Pardo-de-Santayana, M. (2006). Ethnobotany and ethnopharmacology—Interdisciplinary links with the historical sciences. *Journal of Ethnopharmacology*, 107(2), 157-160.
<https://doi.org/10.1016/j.jep.2006.05.035>

8. Kufer, J., Heinrich, M., Förther, H., & Pöll, E. (2005). Historical and modern medicinal plant uses - the example of the Ch'orti' Maya and Ladinos in Eastern Guatemala. *Journal of Pharmacy and Pharmacology*, 57(9), 1127-1152. <https://doi.org/10.1211/jpp.57.9.0008>
9. Laboratorio de Investigación de Productos Naturales. (2008, diciembre). *Caracterización química y evaluación de la actividad biológica de Bourreria huanita Hemsl. (Esquisuchil) y Litsea guatemalensis*. Dirección General de Investigación de la Universidad San Carlos de Guatemala.
<https://digi.usac.edu.gt/bvirtual/informes/puicb/INF-2008-087.pdf>
10. Marcotullio, M., Curini, M., & Becerra, J. (2018). An Ethnopharmacological, Phytochemical and Pharmacological Review on Lignans from Mexican Bursera spp. *Molecules*, 23(8), 1976.
<https://pubmed.ncbi.nlm.nih.gov/30096772/>
11. Martínez, M. (1989). *Las plantas medicinales de México*. Ediciones Botas.

12. Mazari, M. E. L., Bye, R., & Peñafiel, B. F. (1990). *Tés curativos de México*. Universidad Nacional Autónoma de México.
13. Mohanasundari, C., Natarajan, D., Srinivasan, K., Umamaheswari, S., & Ramach, A. (2007). Antibacterial properties of Passiflora foetida L. a common exotic medicinal plant. *African Journal of Biotechnology*, 6(23), 2650-2653. <https://doi.org/10.5897/ajb2007.000-2426>
14. Morales Choy, L. (2016). *Na'oj Maya Aq'om: Sabiduría Médica Maya* (1.^a ed.). Xtz'aj Chi Ixmulew.
15. Morgan Szybist, R. J. (2010). *Natural Healing: A Journey to the World of Atitlan*. Ediciones Papiro.
16. Vilar, D. A., Raffin, F. N., & Formiga Melo Diniz, M. F. (2014). Traditional Uses, Chemical Constituents, and Biological Activities of Bixa orellana L.: A Review. *The Scientific World Journal*, 11-22.
<https://pubmed.ncbi.nlm.nih.gov/25050404/>