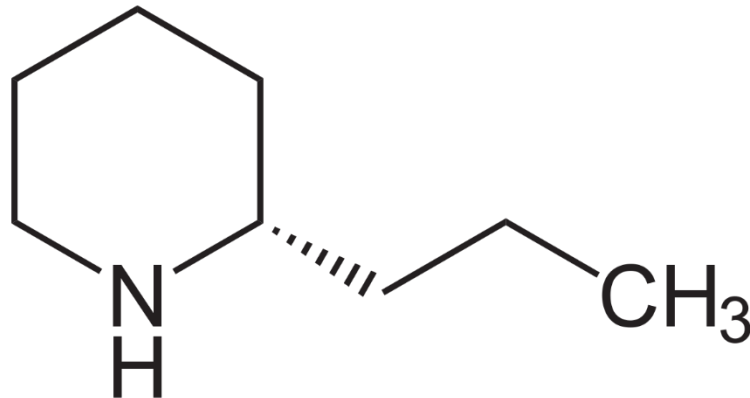


Fructus Conii (Hemlock fruit)

- *Conium maculatum*
- Umbelliferae/Apiaceae
- An old and toxic plant endemic to Europe.
- Also involved in the medicine of the Anglo-Saxons.

- **Coniine** is the main alkaloid of the plant, it is also the first alkaloid synthesized.
- Coniine takes place in the dried immature fruits of *C. maculatum*. Fruit does not have significant glandular channels. Plant also contains essential oil.
- *Conium maculatum* (hemlock) contains a poisonous piperidine **alkaloid**, coniine, and related **alkaloids**, N-methyl-coniine, conhydrine, pseudoconhydrine, and gamma-coniceine. It has well-established teratogenic activity in certain animal species. Not like other alkaloids, the coniine does not consist of amino acids in the biosynthetic pathway.

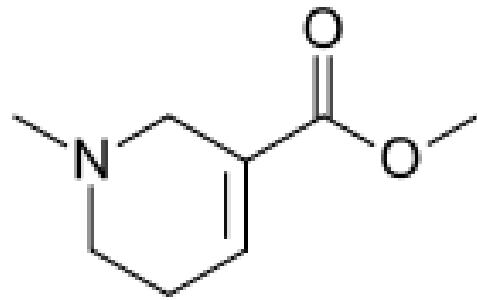
Coniine



Semen Arecae-Arecae nuts

- *Areca catechu* is a species of palm which grows in much of the tropical Pacific, Asia, and parts of east Africa.
- The palm is believed to have originated in the Philippines, but is widespread in cultivation and is considered naturalized in southern China, Taiwan, India, Bangladesh, the Maldives, Sri Lanka, Cambodia, Laos, Thailand, Vietnam, Malaysia, Indonesia, New Guinea, many of the islands in the Pacific Ocean, and also in the West Indies.
- Seeds are the used parts.

- The seed contains alkaloids such as arecaidine and **arecoline** 0.1-0.5 %, when chewed, are poisonous and slightly addictive.
- The seed also contains condensed tannins (procyanidins) called arecatannins which have carcinogenic effect. Drug is used for intestinal parasite diseases, diarrhea, edema, swelling and pain.



arecoline



Terpene Alkaloids

- Monoterpene (Radix Valerianae), sesquiterpene and diterpene alkaloids.
- *Aconitum*, *Delphinium*, *Taxus* species carry diterpene alkaloids.
- Alkaloids with 20 C are more simple and less toxic compounds compared to alkaloids with 19 C.

Tubera Aconiti-Monk's-hood, Aconite or Wolfsbane-Kurtboğan

- *Aconitum napellus* (Ranunculaceae), is a species of highly toxic flowering plant in the genus *Aconitum*, native and endemic to western and central Europe. Plant has purple flowers. The underground part has two tubers.
- The plant is extremely poisonous in both ingestion and skin contact.
- Aconites have been used more recently in murder plots; the chemical alkaloids 0.3-1.2% are aconitine, mesaconitine, hypaconitine and jesaconitine, which are highly toxic.

- Used in nervous trigeminus neuralgia, as an analgesic and cough sedative.
- *Aconitum japonicum* (Japanese aconiti): Cardiotonic effect. Important in oriental medicine.
- *A. carmichaelii*, *A. kusnezofii*, *A. brachypodum* are used in Chinese medicine.
- *A. chasmanthum* roots take place in Indian Pharmacopoeia.