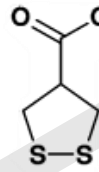


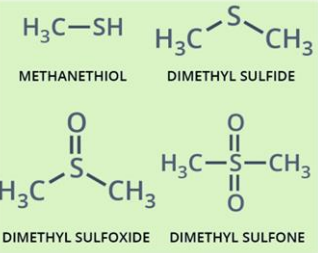


Plant of the Month
By Phung Hoang, Alkemist Labs



Asparagusic acid
An organosulfur compound when digested breaks down into several sulfurous compounds, which are responsible for the sulfur-like smell from urine observed after ingesting asparagus.

Chemistry



These four compounds are responsible for the distinctive smell in urine after being broken down from asparagusic acid.

Pharmacology

Today, asparagus is used in the treatments for urinary problems such as cystitis. It is also useful in the treatment of rheumatic conditions, is a mild laxative and sedative, and is considered useful in the treatment of a range of maladies from arthritis to tuberculosis. Asparagus is also known to be a strong diuretic and is used in the treatment of urinary problems such as cystitis. Glutathione is found in asparagus and used as a powerful antioxidant to boost the immune system and support healthy liver.

Asparagus officinalis

Asparagus



History

Asparagus has been both harvested from the wild and cultivated for thousands of years and has become an economically important crop. There are depictions of it on Egyptian tombs dating from the 4th century BC, and evidence suggests it was cultivated in ancient Rome. The name asparagus comes from Greek "asparagos" meaning sprout or shoot, and officinalis refers to its medicinal properties.

Botany

The herb of the asparagus has true leaves that are reduced to scales on the stem. Male and female flowers are borne of separate plants. Flowers of both sexes have six petals. Male yellow flowers are about 5mm, the female flowers are yellow-green and about 4mm long. Berries are red about 8mm in diameter containing up to six black seeds.



Cultivation/ Uses

Asparagus is a perennial plant harvested during the 2nd year when sown by their crown or 3rd year when sown by seed. Asparagus seeds or crowns should be planted in March or April. Harvesting begins at the end of April when the spears reaches approximately 15cm tall and goes through early July. Spears or foliage are cut down to soil level once yellow for dormancy during autumn and winter. The largest production regions are China, Western Europe, North America, and Peru. Young spears of the asparagus are eaten. Any byproducts, such as the hard stems, are highly rich in sources of phytochemicals and dietary fibers.



References

1. Asparagus (*Asparagus officinalis*): Processing effect on nutritional and phytochemical composition of spear and hard-stem byproducts – ScienceDirect
<https://www.sciencedirect.com/science/article/abs/pii/S0924224419303887>
2. *Asparagus officinalis* L. Plants of the World Online. Kew Science.
<https://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:531229-1>
3. Chemical constituents of Asparagus - PMC (nih.gov).
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3249924/#:~:text=Other%20primary%20chemical%20constituents%20of,of%20glucose%20%5Bfigure%201%5D>.
4. Metabolites | Free Full-Text | Green and White Asparagus (*Asparagus officinalis*): A Source of Developmental, Chemical and Urinary Intrigue (mdpi.com). <https://www.mdpi.com/2218-1989/10/1/17>
5. Metabolites | Free Full-Text | Metabolomics Reveals Heterogeneity in the Chemical Composition of Green and White Spears of Asparagus (*A. officinalis*) (mdpi.com). <https://www.mdpi.com/2218-1989/11/10/708>