Plant of the Month
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\\NAS\Station 15\Plant of the Month\

Silymarin Milk Thistle by HPLC

Silybin A - 23.351
Silybin B - 24.381
Silychristin - 16.043
Silydianin - 17.760
Dehydrosilybin - 25.684
Isosilybin A - 27.684
Isosilybin B - 28.729

Silybin A

Milk Thistle
Silybum marianum
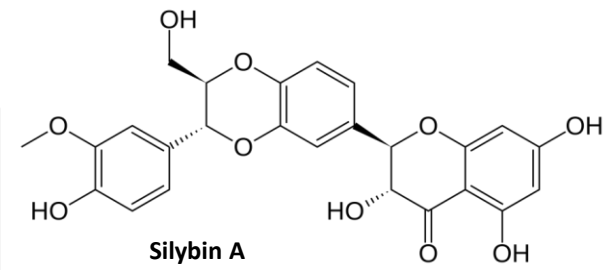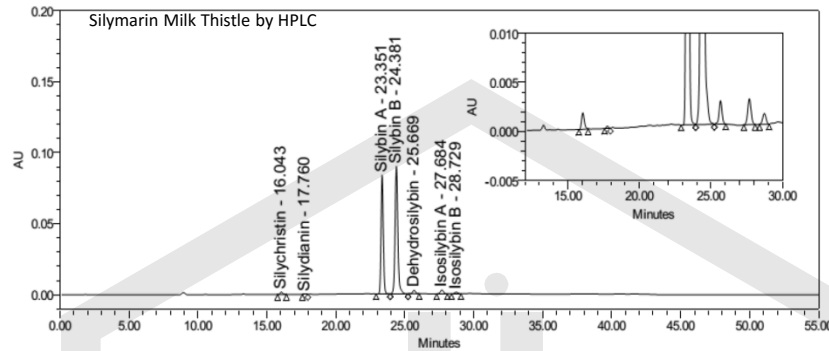
Chemistry

The active ingredient in milk thistle is silymarin, a chemical extracted from the seeds. Silymarin is actually a group of flavonoids silybin A and B, isosilybin A and B, silydianin, and silycristin. Most milk thistle products are standardized preparations made from the seeds of the plant, to contain 70 to 80% of silymarin.

History/Traditional Use

Milk thistle is a flowering herb native to the Mediterranean region, and is now found throughout the world. It gets its name from the milky white sap that comes from the leaves when they are crushed. It has been used for thousands of years as a remedy for a variety of ailments, and historically was thought to have protective effects on the liver and improve its function. Today, its primary folk uses include liver disorders and gallbladder disorders.

Sales

Manufacturing: $16,400,00 (12th)
Consumer: $9,200,00 (6th)

Pharmacology

Silymarin extracted from the seeds is believed to be the biologically active part of the milk thistle. Laboratory studies have suggested that it may benefit the liver by protecting and promoting the growth of liver cells, fighting oxidation, and inhibiting inflammation. Other folk uses include lowering cholesterol levels, reducing insulin resistance, and reducing the growth of breast, cervical, and prostate cancer cells.

Botany/Preparation

Milk thistle is a member of the asteraceae family, which also includes sunflowers and daisies. This stout thistle usually grows in dry, sunny areas, reaching heights of 5 to 10 feet. The seeds spreads quickly (it is considered a weed in some parts of the world), and it matures in less than a year. Silymarin is extracted from the seeds (fruit), and are used to prepare capsules, extracts, powders, and tinctures.

References

1. https://nccih.nih.gov/health/milkthistle/ataglance.htm
2. http://umm.edu/health/medical/altmed/herb/milk-thistle
3. http://www.webmd.com/heart-disease/milk-thistle-benefits-and-side-effects