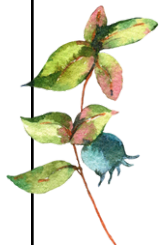


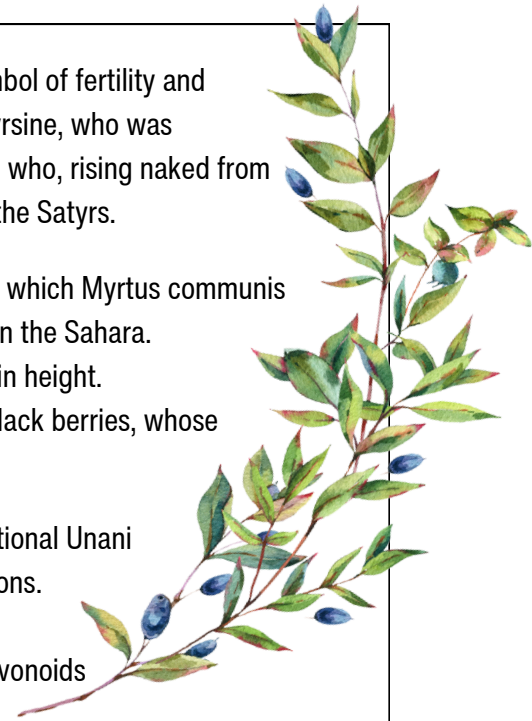
Myrtus Communis

Myrtle, a word of Greek origin from myrtos, means fragrant essence. A symbol of fertility and sacredness, it has often been associated with female divinatory figures. Myrsine, who was transformed into a myrtle shrub after being killed out of envy, or Aphrodite, who, rising naked from the sea in all her beauty, had to hide behind a bush of this plant to escape the Satyrs.

Belonging to the Myrtaceae family, it includes about 3,000 species, among which *Myrtus communis* L., widespread in the Mediterranean basin, and *Myrtus nivellei* Batt, found in the Sahara. It thrives in temperate and subtropical climates, reaching up to 2.4 meters in height. It has leathery, evergreen leaves, white hermaphroditic flowers, and blue-black berries, whose dispersion is facilitated by birds.



From an ethnobotanical perspective, myrtle is a key plant in traditional Unani medicine and is used in therapeutic, cosmetic, and food applications. Scientific studies highlight its antimicrobial, antioxidant, and enzyme-inhibitory properties. Extracts from its leaves contain flavonoids and polyphenols with beneficial effects on health.



COSMETIC EFFICACY*

- SANITIZING
- INTIMATE HYGIENE
- ANTIOXIDANT
- ENZYME INHIBITION FOR CHOLINESTERASE, α -AMYLASE, AND TYROSINASE




*claim derived and synthesized, see bibliography

NUTRACEUTICAL EFFICACY

- FLUIDITY OF BRONCHIAL SECRETIONS
- WELL-BEING OF NOSE AND THROAT
- BALSAMIC EFFECT



ARDA NATURA PROPOSAL

-  004322 ACQUA DI MIRTO - Myrtus Communis Leaf Water
-  005880 E.GLICERICO U.C. PE - Glycerin, Aqua, Myrtus communis Leaf Extract
-  007643-25 E.GLICERICO MIRTO U.A.

Mirto



Etymology

In its modern understanding, the word derives from the Greek “myrtos” (“myrtus” for the Latins) and means *scented essence*. It is the sacred plant of the Gods and according to Greek mythology it takes its name from Myrsine, a girl from Attica killed out of envy by a friend she beat at the gymnastic games. Athena, moved to compassion by this death, transformed her into a scented shrub.

Both Greek and Latin culture associate myrtle with fertility, consecrating it to Aphrodite who, at birth, rising naked from the sea in all her beauty, had to hide behind a bush of this plant to escape the Satyrs.

A Cretan song claims that myrtle had aphrodisiac powers, that you had to pick a branch if you wanted to be loved and that even by touching it you were struck by a new and lasting passion. [1]

Intro

Family Myrtaceae includes approximately 100 genera and 3000 species growing in temperate, tropical, and subtropical regions of the world.

The genus *Myrtus* L comprises 2 species:

Myrtus communis L (common myrtle) growing wild all around the Mediterranean basin
Myrtus nivellei Batt (Saharan myrtle) found in central Sahara.

It is an aromatic evergreen perennial shrub.

Mid-June to early July is when *Myrtus* blooms profusely and its fruit berries turn black blue after maturing from mid-October to late November.

Taxonomy

Kingdom	Plantae
Phylum	Magnoliophyta
Class	Magnoliopsida
Subclass	Rosidae
Order	Myrtales
Family	Myrtaceae
Genus	Myrtus
Species	Myrtus communis L.

Ethnobotanical Uses

The common myrtle is one of the most important drugs being used in Unani system of medicine, which originated in Greece and expanded by Arabs into an elaborate medical science based on the framework of the teaching of Hippocrates and Galen. It is a well-known shrub for its therapeutic, cosmetic, and food uses.

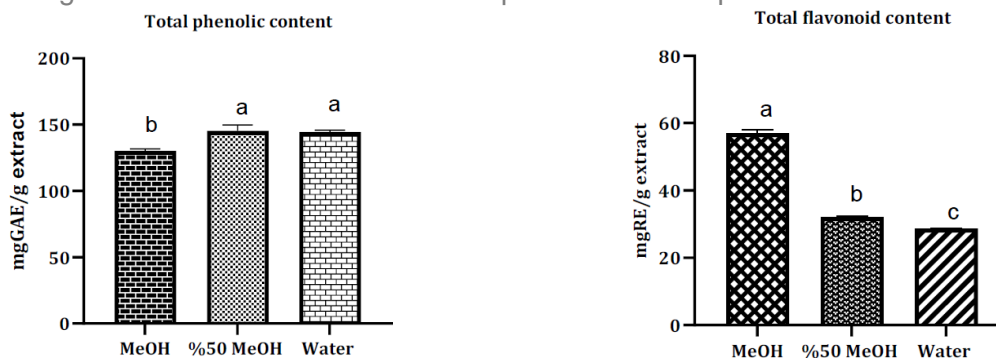
The name and use of M communis have been associated with myth and rituals in many societies.

Botanical Sources and Other Characteristics	General Description About This Plant	References
Botanical origin	Family: Myrtaceae Genus: -Myrtus Species name: Myrtus communis Linn (from Greece) Vernacular names (in Ethiopia): Ades (Amharic, Guragegna Tigregna), Addisaa, Coddoo (Affan Oromo); Wobattaa (Welaitigna)	[3] [4] [5] [6]
Geographical origin	Only species of the genus found in the Northern Hemisphere, Southern Europe, North Africa, and West Asia Widespread in the Mediterranean region and other areas It is highly drought tolerant and needs only little to moderate water. It can grow in damp places, shades as well as full sunup to 800 m altitudes	[3] [7] [8]
Organoleptic properties	Leaves: Dark green, glossy, glabrous, coriaceous Flowers: White, yellow anthers, fragrant smelling Berries: Blue black Fruits: Bitter when unripe, sweet when ripe Essential oil: Myrtle oil (very fragrant aromatic oil of this plant)	[3] [4] [7] [8]

[9]

Phenols and flavonoids content

Yaghoobi *et al.* (2022) reported methanol and water extracts of myrtle leaves showed higher total flavonoid content compared other solvents (ethanol and ethyl acetate). Wannas *et al.* (2010) showed that the leaf and stem of *M. communis* var *italica* contained higher amount of flavonoid compounds in comparison to flower extract.



Total flavonoid content of *M. communis* leaves extracts. Different letters in column indicate significant differences in the studied extracts ($p < 0.05$).

All tested extracts showed inhibition efficacy against AChE, α -amylase and tyrosinase enzymes.

BIOLOGICAL ACTIVITY from scientific literature

- ANTIMICROBICA

The leaves of *M. communis* L revealed promising antimicrobial activities in the aqueous and ethanolic crude extracts.

In a comparative study, patients treated with both *M. communis* L and metronidazole base did not show any relapse; however, from those who were treated with metronidazole alone, 30% of them experienced relapsed during the follow-up period. From this it can be concluded that vaginal gel containing both the extract and the base is a more effective antibacterial than the base alone.

[10]

- ANTIOXIDANT M. Communis L leaves

Assays	Myrtus communis -MeOH	Myrtus communis -50% MeOH	Myrtus communis -Water
DPPH (mmolTE/g)**	2.86±0.14c*	3.07±0.11b	3.36±0.05a
ABTS (mmolTE/g)**	2.29±0.03c	2.68±0.04b	3.38±0.02a
CUPRAC (mmolTE/g)**	3.50±0.05c	3.85±0.10b	4.58±0.06a
FRAP (mmolTE/g)**	1.97±0.06c	2.53±0.09b	2.75±0.04a
Phosphomolybdenum (mmolTE/g)**	4.08±0.25b	4.49±0.18a	4.52±0.02a
Metal chelating (mgEDTAE/g)***	34.05±1.70c	31.63±1.50b	45.60±1.08a

*Values expressed are means ±SD **TE: trolox equivalents, ***EDTAE: isodium edetate equivalents. Different letters in same row indicate significant differences in the studied extracts ($p < 0.05$).

The antioxidant property of water extract was higher than that of other extracts.

- ENZYMATIC INHIBITION M. Communis L leaves

Assays	Myrtus communis -MeOH	Myrtus communis -50% MeOH	Myrtus communis -Water
AChE (mgGALAE/g)**	4.38±0.18a*	3.44±0.28b	2.73±0.07c
BChE (mgGALAE/g)**	1.58±0.15	nd	nd
Amylase (mmolACE/g)***	0.56±0.02a	0.21±0.02b	0.10±0.01c
Glucosidase (mmolACE/g)***	nd	nd	nd
Tyrosinase (mgKAE/g)****	132.20±0.77a	124.94±0.67b	71.84±1.27c

*Values expressed are means ±SD **GALAE:galanthamine equivalents; ***ACE: acarbose equivalents; ****KAE:kojic acid equivalents; nd: not determined. Different letters in same row indicate significant differences in the studied extracts ($p < 0.05$).



Tyrosinase is the key enzyme in melanin biosynthetic metabolism (Pillaiyar et al., 2017). Inhibition of these enzymes is one of the current strategies for skin disorders management. The effects of *M. communis* extracts were tested on cholinesterase, α -amylase inhibition, α -glucosidase, and tyrosinase inhibitory effect. As demonstrated in the table above, *M. communis* MeOH extract showed the highest AChE inhibition with 4.38 mg GALAE/g. In BChE assay, only MeOH extract (1.58 mg GALAE/g) displayed the activity against BChE. The α -amylase inhibition results showed that MeOH extract had significant higher activity than %50- MeOH and water extract. None of the extracts showed inhibition effect against α -glucosidase enzyme. The order of tyrosinase enzyme inhibition effect of extracts was as follows: MeOH (132.20 mg KAE/g) > 50% MeOH (124.94 mg KAE/g) > water (71.84 mgKAE/g). [11]

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Le immagini sono state create con l'aiuto dell'intelligenza artificiale.