

# Parsley Leaf and Root Profile

## Also known as

Petroselinum crispum, Common Parsley, Garden Parsley, Curled Parsley, Devil's Oatmeal, Petersylinge.

## Introduction

While all of us know parsley as a condiment and garnish, most of us never consume its most flavorful part of the root. Parsley has been an important food for at least 3,000 years. Parsley is thought to have originated in Sardinia, or the surrounding area, and to have spread across Europe by the 15th century. There are a great many myths and folktales concerning parsley. It was said to have come from the spilled blood of Archemorus when he was eaten by serpents. It was also long associated with Persephone and the underworld, which may certainly account for the lingering superstition that it is bad luck to transplant parsley; it should always be grown directly from the seed. Also, the Greek saying "to be in need of parsley" meant that someone was extremely ill and not expected to survive. Wreaths of parsley were also worn to honor the dead.

## Constituents

The root and leaves contain the same essential oil, although concentrations are greater in the root. The main components (10-30%) are myristicin, limonene and 1,3,8-p-menthatriene; minor components are mono- and sesquiterpenes. The curly varieties tend to be richer in myristicin, but contain much less essential oil. The essential oil in the "seed" (3-6% of the total weight of the fruit) is either dominated by myristicin (60 to 80%; mostly var. tuberosum and var. crispum) or by apiole (70%; mostly var. latifolium). Seed may also contain allyl tetramethoxy benzene (55 to 75% in some varieties).

## Parts Used

Leaf, whole or chopped, fresh or dried; "seeds" (actually fruits); and root.

## Typical Preparations

Both the leaf and root can be used as tea or tincture; usually used in cooking. Both can be manufactured into an extract.

## Summary

The most common use of parsley is as an edible breath freshener. In cooking, parsley lightens the taste of garlic and the odor of fish. Parsley can be added to almost any food except sweets. Naturopathic practitioners often recommend fresh parsley as a detoxifier because of its concentrated chlorophyll.

# Precautions

Parsley root salad, very popular in German and Scandinavian cuisine, can increase risk of sunburn if eaten by fair-skinned person who take ACE inhibitors for high blood pressure. Parsley leaf and parsley seed do not have this effect.

**Botanical: *Carum petroselinum* (BENTH.)**

**Family: N.O. Umbelliferae**

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---**Synonyms**---*Apium petroselinum* (Linn.). *Petroselinum lativum* (Hoffm.). Petersylinge. Persely. Persele.

---**Parts Used**---Root, seeds.

---**Habitat**---The Garden Parsley is not indigenous to Britain: Linnaeus stated its wild habitat to be Sardinia, whence it was brought to England and apparently first cultivated here in 1548. Bentham considered it a native of the Eastern Mediterranean regions; De Candolle of Turkey, Algeria and the Lebanon. Since its introduction into these islands in the sixteenth century it has been completely naturalized in various parts of England and Scotland, on old walls and rocks.

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*Petroselinum*, the specific name of the Parsley, from which our English name is derived, is of classic origin, and is said to have been assigned to it by Dioscorides. The Ancients distinguished between two plants *Selinon*, one being the Celery (*Apium graveolens*) and called *heleioselinon* - i.e. 'Marsh *selinon*,' and the other - our parsley - *Oreoselinon*, 'Mountain *selinon*'; or *petroselinum*, signifying 'Rock *selinon*.' This last name in the Middle Ages became corrupted into *Petrocilium* - this was anglicized into Petersylinge, Persele, Persely and finally Parsley.

There is an old superstition against transplanting parsley plants. The herb is said to have been dedicated to Persephone and to funeral rites by the Greeks. It was afterwards consecrated to St. Peter in his character of successor to Charon.

In the sixteenth century, Parsley was known as *A. hortense*, but herbalists retained the official name *petroselinum*. Linnaeus in 1764 named it *A. petroselinum*, but it is now assigned to the genus *Carum*.

The Greeks held Parsley in high esteem, crowning the victors with chaplets of Parsley at the Isthmian games, and making with it wreaths for adorning the tombs of their dead. The herb was never brought to table of old, being held sacred to oblivion and to the dead. It was reputed to have sprung from the blood of a Greek hero, Archemorus, the forerunner of death, and Homer relates that chariot horses were fed by warriors with the leaves. Greek gardens were often bordered with Parsley and Rue.

Several cultivated varieties exist, the principal being the common plain-leaved, the curled-leaved, the Hamburg or broadleaved and the celery-leaved. Of the variety *crispum*, or curled-leaved, there are no less than thirty-seven variations; the most valuable are those of a compact habit with close, perfectly

curled leaves. The common sort bears close leaves, but is of a somewhat hardier nature than those of which the leaves are curled; the latter are, however, superior in every way. The variety *crispum* was grown in very early days, being even mentioned by Pliny.

Turner says, 'if parsley is thrown into fishponds it will heal the sick fishes therein.'

The Hamburg, or turnip-rooted Parsley, is grown only for the sake of its enlarged fleshy tap-root. No mention appears to have been made by the Ancients, or in the Middle Ages, of this variety, which Miller in his *Gardeners' Dictionary* (1771) calls 'the largerooted Parsley,' and which under cultivation develops both a parsnip-like as well as a turnip-shaped form. Miller says:

'This is now pretty commonly sold in the London markets, the roots being six times as large as the common Parsley. This sort was many years cultivated in Holland before the English gardeners could be prevailed upon to sow it. I brought the seeds of it from thence in 1727; but they refused to accept it, so that I cultivated it several years before it was known in the markets.'

At the present day, the 'long white' and the 'round sugar' forms are sold by seedgrowers and are in esteem for flavouring soups, stews, etc., the long variety being also cooked and eaten like parsnips.

Neapolitan, or celery-leaved, parsley is grown for the use of its leafstalks, which are blanched and eaten like those of celery.

The plain-leaved parsley was the first known in this country, but it is not now much cultivated, the leaves being less attractive than those of the curled, of a less brilliant green, and coarser in flavour. It also has too close a resemblance to Fool's Parsley (*Anthriscus cynapium*), a noxious weed of a poisonous nature infesting gardens and fields. The leaves of the latter, though similar, are, however, of a rather darker green and when bruised, emit an unpleasant odour, very different to that of Parsley. They are, also, more finely divided. When the two plants are in flower, they are easily distinguished, *Anthriscus* having three tiny, narrow, sharp-pointed leaflets hanging down under each little umbellule of the white umbel of flowers, whereas in the Garden Parsley there is usually only one leaflet under the main umbel, the leaflets or bracts at the base of the small umbellules only being short and as fine as hairs. *Anthriscus* leaves, also, are glossy beneath. Gerard called *Anthriscus* 'Dog's Parsley,' and says 'the whole plant is of a naughty smell.' It contains a peculiar alkaloid called Cynapium.

Stone Parsley (*Sison*), or Breakstone, is an allied plant, growing in chalky districts.

*S. Amomum* is a species well known in some parts of Britain, with cream-coloured flowers and aromatic seeds. The name is said to be derived from the Celtic *sium* (running stream), some of the species formerly included growing in moist localities.

Of our Garden Parsley (which he calls Parsele) Gerard says, 'It is delightful to the taste and agreeable to the stomache,' also 'the roots or seeds boiled in ale and drank, cast forth strong venome or poyson; but the seed is the strongest part of the herbe.'

Though the medicinal virtues of Parsley are still fully recognized, in former times it was considered a remedy for more disorders than it is now used for. Its imagined quality of destroying poison, to which Gerard refers, was probably attributed to the plant from its remarkable power of overcoming strong scents, even the odour of garlic being rendered almost imperceptible when mingled with that of Parsley.

The plant is said to be fatal to small birds and a deadly poison to parrots, also very injurious to fowls, but hares and rabbits will come from a great distance to seek for it, so that it is scarcely possible to preserve it in gardens to which they have access. Sheep are also fond of it, and it is said to be a sovereign remedy to preserve them from footrot, provided it be given them in sufficient quantities.

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**---Cultivation---**Parsley requires an ordinary, good well-worked soil, but a moist one and a partially-shaded position is best. A little soot may be added to the soil.

The seed may be sown in drills, or broadcast, or, if only to be used for culinary purposes, as edging, or between dwarf or shortlived crops.

For a continuous supply, three sowings should be made: as early in February as the weather permits, in April or early in May, and in July and early August - the last being for the winter supply, in a sheltered position, with a southern exposure. Sow in February for the summer crop and for drying purposes. Seed sown then, however, takes several weeks to germinate, often as much as a full month. The principal sowing is generally done in April; it then germinates more quickly and provides useful material for cutting throughout the summer. A mid-August sowing will furnish good plants for placing in the cold frames for winter use.

An even broadcast sowing is preferable, if the ground is in the condition to be trodden which appears to fix the seed in its place, and after raking leaves a firm even surface.

The seed should be but slightly covered, not more than 1/2 inch deep and thinly distributed; if in drills, these should be 1 foot apart.

It is not necessary, however (though usual), to sow the seed where the plants are to be grown, as when large enough, the seedlings can be pricked out into rows.

When the seedlings are well out of the ground - about an inch high - adequate thinning is imperative, as the plants dislike being cramped, and about 8 inches from plant to plant must be allowed: a well-grown plant will cover nearly a square foot of ground.

The rows should be liberally watered in dry weather; a sheltered position is preferred, as the plants are liable to become burnt up in very hot and dry summers. The rows should be kept clean of weeds, and frequent dressings may be applied with advantage.

If the growth becomes coarse in the summer, cut off all the leaves and water well. This will induce a new growth of fine leaves, and may always be done when the plants have grown to a good size, as it encourages a stocky growth.

Soon after the old or last year's plants begin to grow again in the spring, they run to flower, but if the flower stems are promptly removed, and the plants top dressed and watered, they will remain productive for some time longer. Renew the beds every two years, as the plant dies down at the end of the second season.

When sowing Parsley to stand the winter, a plain-leaved variety will often be found superior to the curled or mossy sorts, which are, perhaps, handsomer, but the leaves retain both snow and rain, and when frost follows, the plants soon succumb. A plainleaved Parsley is far hardier, and will survive even a severe winter and is equally good for cooking, though not so attractive for garnishing. Double the trouble is experienced in obtaining a supply of Parsley during the winter, when only the curled-leaved varieties are given.

Where curled Parsley is desired and is difficult to obtain, because there is no sufficiently sheltered spot in the garden for it, it may often be saved by placing a frame-light over the bed during severe weather to protect the plants, or they may be placed altogether in cold frames. Care must be taken with all Parsley plants grown thus in frames, to pick off all decaying leaves directly noticed, and the soil should be stirred occasionally with a pointed stick between the plants, to prevent its becoming sour. Abundance of

air should be given on all favourable occasions, removing the light altogether on fine days.

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**---Medicinal Action and Uses---**The uses of Parsley are many and are by no means restricted to the culinary sphere. The most familiar employment of the leaves in their fresh state is, of course, finely-chopped, as a flavouring to sauces, soups, stuffings, rissoles, minces, etc., and also sprinkled over vegetables or salads. The leaves are extensively cultivated, not only for sending to market fresh, but also for the purpose of being dried and powdered as a culinary flavouring in winter, when only a limited supply of fresh Parsley is obtainable.

In addition to the leaves, the *stems* are also dried and powdered, both as a culinary colouring and for dyeing purposes. There is a market for the seeds to supply nurserymen, etc., and the roots of the turnip-rooted variety are used as a vegetable and flavouring.

*Medicinally*, the two-year-old *roots* are employed, also the *leaves*, dried, for making Parsley Tea, and the *seeds*, for the extraction of an oil called Apiol, which is of considerable curative value. The best kind of seed for medicinal purposes is that obtained from the Triple Moss curled variety. The wholesale drug trade generally obtains its seeds from farmers on the East coast, each sample being tested separately before purchases are made. It has been the practice to buy second-year seeds which are practically useless for growing purposes: it would probably hardly pay farmers to grow for Apiol producing purposes only, as the demand is not sufficiently great.

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**---Constituents---**Parsley Root is faintly aromatic and has a sweetish taste. It contains starch, mucilage, sugar, volatile oil and Apiin. The latter is white, inodorous, tasteless and soluble in boiling water.

Parsley fruit or 'seeds' contain the volatile oil in larger proportion than the root (2.6 per cent); it consists of terpenes and Apiol, to which the activity of the fruit is due. There are also present fixed oil, resin, Apiin, mucilage and ash. Apiol is an oily, nonnitrogenous allyl compound, insoluble in water, soluble in alcohol and crystallizable when pure into white needles. The British Pharmacopoeia directs that Apiol be prepared by extracting the bruised fresh fruits with ether and distilling the solvent. The residue is the commercial liquid Apiol. It exercises all the virtues of the entire plant. Crystallized Apiol, or Parsley Camphor, is obtained by distilling the volatile oil to a low temperature. The value of the volatile oil depends on the amount of Apiol it contains. Oil obtained from German fruit contains this body in considerable quantity and becomes semi-solid at ordinary temperature, that from French fruit is much poorer in Apiol. In France, only the crystalline Apiol is official, but three different varieties, distinguished as green, yellow and white, are in use.

Apiol was first obtained in 1849 by Drs. Joret and Homolle, of Brittany, and proved an excellent remedy there for a prevailing ague. It is greatly used now in malarial disorders. The name Apiol has also been applied to an oleoresin prepared from the plant, which contains three closely-allied principles: apiol, apiolin and myristicin, the latter identical with the active principle of oil of Nutmeg. The term 'liquid Apiol' is frequently applied to the complete oleoresin. This occurs as a yellowish liquid with a characteristic odour and an acrid pungent taste. The physiological action of the oleoresin of Parsley has not been sufficiently investigated, it exercises a singular influence on the great nerve centres of the head and spine, and in large doses produces giddiness and deafness, fall of blood-pressure and some slowing of the pulse and paralysis. It is stated that the paralysis is followed by fatty degeneration of the liver and kidney, similar to that caused by myristicin.

Parsley has carminative, tonic and aperient action, but is chiefly used for its diuretic properties, a strong

decoction of the root being of great service in gravel, stone, congestion of the kidneys, dropsy and jaundice. The dried leaves are also used for the same purpose. Parsley Tea proved useful in the trenches, where our men often got kidney complications, when suffering from dysentery.

A fluid extract is prepared from both root and seeds. The extract made from the root acts more readily on the kidneys than that from other parts of the herb. The oil extracted from the seeds, the Apiol, is considered a safe and efficient emmenagogue, the dose being 5 to 15 drops in capsules. A decoction of bruised Parsley seeds was at one time employed against plague and intermittent fever.

In France, a popular remedy for scrofulous swellings is green Parsley and snails, pounded in a mortar to an ointment, spread on linen and applied daily. The bruised leaves, applied externally, have been used in the same manner as Violet leaves (also Celandine, Clover and Comfrey), to dispel tumours suspected to be of a cancerous nature. A poultice of the leaves is said to be an efficacious remedy for the bites and stings of poisonous insects.

Culpepper tells us:

'It is very comfortable to the stomach . . . good for wind and to remove obstructions both of the liver and spleen . . . Galen commendeth it for the falling sickness . . . the seed is effectual to break the stone and ease the pains and torments thereof.... The leaves of parsley laid to the eyes that are inflamed with heat or swollen, relieves them if it be used with bread or meat.... The juice dropped into the ears with a little wine easeth the pains.'

Formerly the distilled water of Parsley was often given to children troubled with wind, as Dill water still is.

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**---Preparations and Dosages---**Fluid extract root, 1/2 to 1 drachm. Fluid extract seeds, 1/2 to 1 drachm. Apiol (oil), 5 to 15 drops in capsule.

**---Preparation for Market---**The roots are collected for medicinal purposes in the second year, in autumn or late summer, when the plant has flowered.

To dry Parsley towards the close of the summer for culinary use, it may be put into the oven on muslin trays, when cooking is finished, this being repeated several times till thoroughly dry and crisp, when the leaves should be rubbed in the hands or through a coarse wire sieve and the powder then stored in tins, so that neither air nor light can reach it, or the good colour will not be preserved. In the trade, there is a special method of drying which preserves the colour.

The oil is extracted from the 'seeds' or rather fruits, when *fresh*, in which condition they are supplied to manufacturing druggists.