

MICROSCOPICAL CHARACTERISTICS OF PARSLEY LEAF

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Despite the use of synthetic chemical agents in the treatment of various conditions, natural products still play a major role as starting material for drug discovery. According to the WHO reports, medicinal plants would be the best source for obtaining a variety of drugs. About 80% of the developed countries populations use traditional medicines, derived from medicinal plants. Therefore, the study of plants traditionally used in folk medicine may help discover new effective phytoremedies.

The aim of our research was to carry out the microscopical analysis of parsley greens collected in 2014 in Kharkiv region. Parsley or *Petroselinum crispum* is a species of *Petroselinum* in the family *Apiaceae*, native to the central Mediterranean, and widely cultivated as a herb, a spice, and a vegetable all over the world. For medicinal purposes the dry plant material is used which retains its bright green colour when dried and readily breaks up to form flakes. The taste and odour of the plant material are characteristic.

The upper epidermal cells have shown to be large with thin walls. The absence of stomata on the upper epiderm is characteristic. The underlying palisade parenchymal cells are large and loosely packed. The lower epidermis is represented by cells with thin and sinuous cells. The numerous stomata are of anomocytic type. Over the large veins rounded, forward-projecting papilla occur on both epidermises. The lamina forms teeth at the margin where the epidermal cells tend to be smaller and have straighter walls; in sectional view these cells have thick cuticle. The stomata are abundant in the marginal teeth regions.

The epidermis of the petiole is represented by the large cells which are longitudinally elongated, with slightly thickened walls. From the surface view this thickening is seen as uneven pitting and beading, the cuticle is finely striated. Anomocyte stomata are occasionally found on the epiderm. Parenchyma of the petiole is composed of large cells with moderately thickened walls.

The vascular tissue contained lignified vessels, smaller and with spiral or annular thickening in the veins, and larger and reticulately thickened in the petiole.

Thus, the collected plant material according to its microscopical features has proven to be that of parsley showing the most characteristic features of *Petroselinum crispum* leaf. The study carried out was important for the authenticity determination of the plant material.