

ABSTRACT

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Microscopy of Sambuci fructus from cultivars of Sambucus nigra

Sambucus nigra L. is the important plant of the traditional folk medicine, its knowledge is accepted in the pharmaceutical and food industry. The elderberry fruits are used as diaphoretic, diuretic, during the migraine and neurological difficulties. On the grounds of the rising demand the collection of the wild-growing berries do not suffice and that is the reason for growing the elderberry and its cultivated varieties in plantations. The cultivated varieties of elderberry, which are grown for the use of the fruits in the food industry, could be exactly provided the quality drug for pharmaceutical use.

The thesis is focused on the research of the microscopic characteristics of the elderberries fruits wild-growing elderberry and its cultivated varieties Allesö, Bohatka, Haschberg, Mamut, Sambo, Sambu, Samdal, Sampo, Samyl and Weihenstephan, which originated from the Research and Breeding Institute of Pomology Holovousy Ltd. The berries of the wild-growing elderberry were obtained in the Botanical Garden of Medicinal Herbs of Faculty of Pharmacy in Hradec Králové.

The microscopic preparations were prepared from the elderberries after clearing in solution of chloral hydrate. Complexion cells - their shape and size and also thickness of the epidermal cell walls and cuticle corrugation on their surface were observed and compared in the preparations of particular varieties. Furthermore the shape and the size of the stomata, frequency and the shape of idioblasts containing sand of calcium oxalate.

It was verified by microscopic evaluation of identity that the fruits originated from ten grown cultivated varieties of elderberry fulfil the requirements - given in the Czech Pharmaceutical Codex - for the drug *Sambuci fructus*.

Key words: *Sambucus nigra*, sambuci fructus, varieties, microscopy