PHARMACOGNOSTIC RESEARCH OF POPULUS NIGRA L.

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Populus is a genus of 25–35 species of deciduous flowering plants in the family Salicaceae, native to most of the Northern Hemisphere. English names variously applied to different species include poplar, aspen, and cottonwood.

Populus section Aigeiros – black poplars, some of the cottonwoods. North America, Europe, western Asia temperate:

Populus deltoides – Eastern Cottonwood (Eastern North America),
Populus fremontii – Fremont Cottonwood (Western North America),
Populus nigra – Black Poplar (Europe) Including Populus afghanica,
Populus Ч canadensis (P. nigra Ч P. deltoides) – Hybrid Black Poplar,
Populus Ч inopina (P. nigra Ч P. fremontii) – Hybrid Black Poplar.

It is a medium-sized to large deciduous tree, reaching 20–30 m (rarely 40 m) tall, with a trunk up to 1.5 m diameter. The leaves are diamond-shaped to triangular, 5–8 cm long and 6–8 cm broad, green on both surfaces. The buds are tarry. The species is dioecious (male and female flowers on different plants), with flowers in catkins and pollination by wind. The growth of tree is very quickly.

Their bark, buds and the leaves of Populus which contain various classes of biologically active substances phenolic glycosides, flavonoids, tannin, organic acids, vitamins, terpenoids. However the Populus nigra L. isn't studied enough.

Our goal is the research dynamic of accumulations of biologically active substances in leaves of Populus nigra L. Was studied and optimal terms on their harvest have been determined. These leaves were gathered for the research in Kharkiv, Chernigiv, Donetsk, Rivno regions in 2011-2012. There were pointed the presence of compounds (of tannins, amino, organic and hydroxycinnamomic acids, phenolic glycosides, flavonoids, terpenoids) when the primary studying of the Populus nigra L. leaves was. By the method of gas chromatograpy/mass spectrometry was investigated composition of essential oil of leaves of of the Populus nigra L., which grows on Ukraine. The research was made using Agilent Technology HP 6890 GC-chromatograph with mass-spectrometer detector 5973N. Identification of attar components was made by comparing mass-spectra that we got with the data of NIST 02 library. 45 components are identified. Major of them were salicylic aldehyde (57,5mg/kg), eugenol (85,9mg/kg), squalene (69,9mg/kg).

The main morpho-anatomical diagnostic characteristics of the leaves of Populus nigra L.