

#### 422. VEGETAL MEDICINAL PRODUCTS WITH RESINS

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**Introduction.** The resin-containing herbal medicinal products are very heterogeneous in origin and chemical composition. Therefore, these products have a wide therapeutic application in natural medicine. But, for efficient application of these vegetal medicinal products the complex modern researches are needed.

**Aim of the study.** To elucidate the vegetal medicinal products containing resins.

**Materials and methods.** The profile literature and databases on plants and vegetal products containing resins were analyzed and evaluated.

**Results.** A resin is a solid or highly viscous, sticky flammable organic substance which is insoluble in water. It represents a heterogeneous mixture of volatile oils terpene compounds (polymerized or oxidized) exuded by some plants as secondary metabolites. Plants secrete resins for their protective benefits in response to injury, insect or other pathogen attack. There are some groups of resins depending on the predominance of certain chemical constituents in different vegetal medicinal products: oleo-resins – *Terebentina communis*, *Colophonium*, *Terebentina Veneta*, *Balsamum Canadense*, *Balsamum Copaibae* and oleo-gum resins – *Gummi Myrrhae*, *Olibanum*, *Commiphora Mukul* (these 2 groups represent a mixture of resins, volatile oils with about 50-90% and gums as physiological or pathological exudations); proper resins as volatile oils distillation results from oleo-resins; balsams (the final products of destruction metabolism) – *Propolis*, *Balsamum Peruvianum*, *Benzoe Resina*, *Benzoe*; glycoresins (glycosidic esters of hydroxylated fatty acids with resin appearance), lactoresins (products with milky consistence, in contact with air – solid exudation), gumresins (hard resins mixed with gums, in contact with air – solidifies) – *Guaiaci Resina*, *Gutta-Percha*, *Jalapae Tubera et Resina*, *Scammoniae Resina*; and tars (the result of dry distillation of wood) – *Pix Liquida*, *Pix Pinaceae*, *Pix Abietinarum*, *Pix Cadi*, *Pix Juniperi oxycedri*, *Oleum cadini*, *Pix Betulina*, *Pix Betulae*.

**Conclusions.** The chemical natural group of resins is very complex according to the structure complexity, physical and chemical properties, also methods of extractions and therapeutic application. The vegetal medicinal products with resins are very diverse in chemical structure and composition, thus, they are very complicated in rational and efficient medicinal applications.

**Key words:** resins, classification, vegetal medicinal products.

#### 423. ALGAE BIOTECHNOLOGY PRODUCTS AND THEIR APPLICATION IN THE FOOD AND PHARMACEUTICAL INDUSTRIES

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**Introduction.** The scientific community is constantly looking for new sources of natural chemical compounds to satisfy humanity worldwide with the need for quality phyto-medicines