Description

The **radioprotective** balsam contains extracts of shrubby cinquefoil, horsemint, camomile, black chokeberry fruits, lemon and laurel infusions, apple juice, sugar, and salt. The complex of biologically active substances, including natural antibiotics, flavonoids, and tanning substances, has an antioxidant effect, inactivates oxygen radicals, and inhibits the peroxide oxidation of lipids. The balsam has immunomodulating, anti-inflammatory, antimicrobial, and antimycotic activities.

The **antidepressant** balsam contains extracts of Saint-John’s-wort, marjoram, camomile, mountain ash fruits, lemon and laurel infusions, apple juice, sugar, and salt. The antidepressant properties of the balsam are due to the extract of Saint-John’s-wort containing anthraquinone hypericin. The balsam possesses anti-inflammatory, astringent, spasmylytic, choleretic, and tissue regeneration activities.

Psychodiagnostic tests using the antidepressant balsam revealed a 12.9% decrease in the psychic tension level in experimental groups while in the control group this parameter increased by 14.2 %. The stress level was decreased by 10.4 %.

The **hepatoprotective** balsam contains extracts of saltwort, camomile, mountain ash fruits, lemon and laurel infusions, apple juice, sugar, and salt. It possesses antitoxic, spasmylytic, antioxidant, and anti-inflammatory activities and substitutes foreign hepatoprotective preparations.

**Technical appraisal and economic benefits**

All balsams are ecologically clean natural products of plant origin. They are produced by a novel technology preserving vitamins and biologically active substances. The balsams contain ascorbic acid, carotenoids, flavonoids, flavanols, catechins, organic acids, tanning substances, and macro- and microelements. The ratio of the components provides for a maximum therapeutic effect and a pleasant flavor.

**Application areas**

The **radioprotective** balsam is recommended for the prophylaxis of negative effects of irradiation processes in everyday life and industry, especially in environmentally unfavorable regions; for the adjuvant treatment in rehabilitation of patients subjected to radioactive contamination or irradiation and oncological patients after a radiation therapy course; it is useful to computer users.

The **antidepressant** balsam is recommended for the prophylaxis and adjuvant therapy of mild and severe depressions, seasonal affective disorders, sleeplessness, anxiety, and nervousness; for increasing vitality, mental and physical working capacity, and the organism’s resistance to psychoemotional stresses; as an adjuvant in treating gastrointestinal disturbances; and as a component of complex rehabilitation in sanatoria, dispensaries, and clinics.

The **hepatoprotective** balsam is recommended for the treatment of toxic and drug liver lesion (including alcoholic intoxication), biliary dyscinemia; as an adjuvant in the treatment of cholelithiasis and chronic hepatitis; for rehabilitation of patients after viral hepatitis; and for the prevention and adjuvant therapy of diseases followed by digestive disorders.

**Development stage**

The balsams are used in the rehabilitation of patients at the Beryozoviy sanatorium.

Initial stage of production was launched by the Skrizhal company.
Patent situation
Sanitary certificates and technological documentation for the balsams are available.

Commercial offers
Agreement on further research and development of balsams based on plant raw materials.

Estimated Cost
Price is to be negotiated.

Contacts
Alevtina G. Valutskaya, Cand. Sc., Scientific Secretary
Central Siberian Botanical Garden, SB RAS
101, Zolotodolinskaya st., Novosibirsk, 630090, Russia
Phone: (383) 339-55-86
Fax: (383) 330-19-86
E-mail: root@botgard.nsk.su

Research Institute of Clinical and Experimental Lymphology, SB RAMS
2, Timakova st., Novosibirsk, 630017, Russia
Phone: (383) 332-56-53, 332-95-31

Skrizhal JSC
13, Stroitelei prosp., Novosibirsk, 630055
Phone: (383) 333-27-43