

Patient Information Leaflet
Biologically active dietary supplement ACTOFLOR[®]-S

A new generation metabiotic:
a complex of bacterial metabolites
with a proven regulatory effect

Dosage form: oral solution in 2 ml dropper tubes. 30 dropper tubes in a pack.

Composition per 2 ml:

Active ingredients: L-aspartic acid – 1.8 mg (0.09 %); Glycine – 2.4 mg (0.12 %); L-leucine – 3 mg (0.15 %); L-alanine – 4.1 mg (0.20 %); L-methionine – 6.8 mg (0.34 %); L-valine – 13.4 mg (0.67 %); L-glutamic acid – 13.4 mg (0.67 %); L-lysine hydrochloride – 16.7 mg (0.83 %); Formic acid – 21 mg (1.05 %); Succinic acid – 32.4 mg (1.62 %); D, L-lactic acid – 49.4 mg (2.47 %);

Inactive ingredients: Sodium acetate – 232 mg (11.62 %); Sodium hydroxide – 18.2 mg (0.91 %); Water for injection – to 2 ml (79.26 %).

Domain of usage:

ACTOFLOR[®]-S is a new generation metabiotic, which is a complex of amino acids and organic acids being analogues of pro-biotic bacteria metabolites. Synergistic effect of the components included in the complex increases physiological activity and stimulates growth of beneficial microflora of a man, increases its antagonistic activity against pathogenic microorganisms.

Human intestinal microflora performs many functions, the most important of which is the metabolic one. Bacteria produce metabolites that act as signaling molecules, exerting direct influence on metabolism, functions of bowel, liver, brain, and processes in adipose and muscle tissue.

ACTOFLOR[®]-S is recommended as a metabiotic for restoration of intestinal microflora and normalization of its metabolic activity, as well as an additional source of amino acids, including essential and organic acids having a proven regulatory effect.

A complex of bacterial metabolites and amino acids restores the balance of intestinal microflora that may be violated because of diseases of the gastrointestinal tract, stress, poor environmental conditions, unbalanced nutrition and other reasons, helps eliminate symptoms of intestinal disorders (diarrhea, constipation, distension, pain), prevents from side effects of antibiotics, improves metabolism and has a positive effect on the immune system, increasing body resistance to infections and stress.

Succinic acid, L-glutamic acid and essential amino acids L-lysine and L-methionine are the most active stimulators of the growth of the probiotic strain *E. coli* M-17, recommended by the Ministry of health of the Russian Federation for use in immunological products – probiotics containing coli. L-methionine is the most effective natural antioxidant according to contemporary data.

The components of ACTOFLOR®-S, especially succinic acid, have a positive impact on the proliferative activity of cells of the immune tissue, stimulating the human immune system.

Sodium acetate is a growth stimulator of bifidobacteria and other representatives of normal microflora, together with the lactic and formic acids it increases antagonistic activity of the gut microflora, prevents from the overgrowth of opportunistic pathogenic bacteria and inhibits the growth of pathogenic strains of *Escherichia coli* and *Salmonella enterica*, which causes salmonellosis. In epithelial cells of a bowel, as well as in adipocytes, immune and other cells, acetate interacts with specific protein receptors (GPR40, GPR41, GPR43), which is accompanied by induction of expression of genes responsible for production of a number of hormones, responsible for synthesis of energy sources, regulation of appetite and satiation, intestinal motility, and other functions. Sodium acetate increases blood circulation in the intestinal mucosa, and it is an energy substrate for muscle tissue, heart tissue, nephritic tissue and brain tissue. Sodium acetate and lactic acid adjust the level of pH, motor and secretory activity of the intestine, have an antimicrobial effect. Along with formic and succinic acids acetate is a key intermediate of microbial metabolism contributing to the synthesis of other important metabolites for a human body - butyric and propionic acids.

L-glutamic acid participates in protein and carbohydrate metabolism, prevents from the reduction of redox potential, increases body resistance to hypoxia, normalizes metabolism by altering the functional state of the nervous and endocrine systems, being a powerful neurotransmitter. As a result of its decarboxylation by bacteria of the intestines - γ -aminobutyric acid (GABA) is produced which is another important mediator of the central nervous system, the action of which activates energy processes in brain, improves blood circulation, increases respiratory activity of tissues, improves glucose utilization.

The combined effect of eight amino acids (L-alanine, L-aspartic acid, glycine, L-glutamic acid, L-valine, L-leucine, L-lysine and L-methionine), four of which are essential amino acids, increases activity effectiveness of regulatory metabolites of ACTOFLOR®-S.

All the components of ACTOFLOR®-S have an expressed synergistic effect and the absence of at least one of them significantly reduces its efficiency.

ACTOFLOR®-S is hypoallergic, does not have immunotoxic properties, does not cause side effects after prolonged use, is compatible with any type of treatment and may be taken both during antibiotic treatment and after it.

ACTOFLOR®-S benefits:

- Provides restoration of the intestinal microflora
- Provides prevention from side effects after antibiotics
- Provides improvement of metabolism
- Increases body resistance to infections and stress

Recommendations for use: Adults - 1 dropper tube orally 2 times a day at mealtimes, diluting in a glass of water (250 ml). Course duration: from 2 weeks to 1 month. If necessary, repeat the course. It is recommended to consult with your doctor before use.

Contraindications: individual intolerance to the components.

Storage conditions: at the temperature not exceeding 30 °C, out of reach of children. Store in the original package.

Expiration date: 3 years.

ACTOFLOR®-S does not contain gluten, lactose and casein. It is a biologically active food supplement, not a drug.

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