Claims

1. Microelement organic chelate complex compound, having the general formula

$$(M)_n(X)_m(Y)_o$$

wherein M is Zn, Cu, Fe, Mn, Ag;
X is NH_3, H_2O;
Y is an amino acid (preferably selected from the group consisting of the 20 naturally occurring amino acids), a fatty acid (preferably formic acid, acetic acid or propionic acid), hydroxy acid (preferably malic acid or lactic acid) and/or polyamino-carboxylic acid (preferably nitrilotriacetic acid or ethylenediamine tetraacetic acid);
n is 1-6;
m is 1-6;
o is 1-8.
wherein the complex is selected form the group consisting of:
copper (H_2O) bisglycinate, copper $(H_2O)_2$ bisglycinate, Cu (H_2O) bismalate, copper $(H_2O)_2$ ethylenediamine tetraacetic acid, Zinc (H_2O) bisglycinate, zinc $(H_2O)_2$ ethylenediamine tetraacetic acid, zinc $(H_2O)_2$ malate, Zn(H_2O) bisalaninate, Zn(H_2O) bisaspartate, Zn(H_2O) bisbutyrate, Zn(H_2O) bisglutamate, Zn(H_2O) bispropionate, Zn(H_2O) bisvalerianate, Zn(H_2O) bismalate, copper $(NH_3)_2$ bisglycinate, copper $(NH_3)_2$ ethylenediamine tetraacetic acid, copper $(NH_3)_2$ bismalate, Cu $(NH_3)_2$ asparaginate, Cu $(NH_3)_2$ bisasparaginate, Cu $(NH_3)_2$ bisglutamate, Cu $(NH_3)_2$ glutamate, zinc $(NH_3)_2$ bismalate, zinc $(NH_3)_2$ ethylenediamine tetraacetic acid, zinc $(NH_3)_2$ malate, zinc $(NH_3)_2$ methionate, zinc $(NH_3)_4$ bisglycinate, zinc $(NH_3)_4$ malate, Zn $(NH_3)_2$ asparaginate, Zn $(NH_3)_2$ aspartate, Zn $(NH_3)_2$ bisasparaginate, Zn $(NH_3)_2$ bisaspartate, Zn $(NH_3)_2$ bisglutamate, Zn $(NH_3)_2$ bisglycinate, Zn $(NH_3)_2$ bishistidinate, Zn $(NH_3)_2$ citrate, Zn $(NH_3)_2$ glutamate.

2. Microelement organic chelate complex compound, for use in the treatment of diseases caused by pathogenic bacteria, having the general formula

$$(M)_n(X)_m(Y)_o$$

wherein M is Zn, Cu, Fe, Mn, Ag;
X is NH_3, H_2O;

Y is an amino acid (preferably selected from the group consisting of the 20 naturally occurring amino acids), a fatty acid (preferably formic acid, acetic acid or propionic acid), hydroxy acid (preferably malic acid or lactic acid) and/or polyamino-carboxylic acid (preferably nitrilotriacetic acid or ethylenediamine tetraacetic acid);
n is 1-6;
m is 1-6;
o is 1-8.

3. The microelement organic chelate complex compound for use according to claim 2, selected form the group consisting of:
copper (H_2O) bisglycinate, copper $(H_2O)_2$ bisglycinate, Cu (H_2O) bismalate, copper $(H_2O)_2$ ethylenediamine tetraacetic acid, Zinc (H_2O) bisglycinate, zinc $(H_2O)_2$ ethylenediamine tetraacetic acid, zinc $(H_2O)_2$ malate, Zn(H_2O) bisalaninate, Zn(H_2O) bisaspartate, Zn(H_2O) bisbutyrate, Zn(H_2O) bisglutamate, Zn(H_2O) bispropionate, Zn(H_2O) bisvalerianate, Zn(H_2O)-bismalate, copper $(NH_3)_2$ bisglycinate, copper $(NH_3)_2$ ethylenediamine tetraacetic acid, copper $(NH_3)_2$ bismalate, Cu $(NH_3)_2$ asparaginate, Cu $(NH_3)_2$ bisasparaginate, Cu $(NH_3)_2$ bisglutamate, Cu $(NH_3)_2$ glutamate, zinc $(NH_3)_2$ bismalate, zinc $(NH_3)_2$ ethylenediamine tetraacetic acid, zinc $(NH_3)_2$ malate, zinc $(NH_3)_2$ methionate, zinc $(NH_3)_4$ bisglycinate, zinc $(NH_3)_4$ malate, Zn $(NH_3)_2$ asparaginate, Zn $(NH_3)_2$ aspartate, Zn $(NH_3)_2$ bisasparaginate, Zn $(NH_3)_2$ bisaspartate, Zn $(NH_3)_2$ bisglutamate, Zn $(NH_3)_2$ bisglycinate, Zn $(NH_3)_2$ bishistidinate, Zn $(NH_3)_2$ citrate, Zn $(NH_3)_2$ glutamate.

4. The compound for use according to claim 2 or 3, wherein the facultative pathogenic bacterium is selected from the group consisting of: Salmonella, E. coli, Clostridium sp., Brachyspyra sp., Arcanobacterium sp., Staphylococcus sp., Streptococcus sp., Lawsonia sp., Eimerella sp.

5. The compound for use according to any of claims 2 to 4, wherein the pathogenic bacterium is selected from the group consisting of: *Salmonella enterica, Salmonella enterica subp. Enterica serovar enteritidis, Salmonella typhimurium, Salmonella infantis, Salmonella gallinarium, S. paratyphi, S. abortus-equi, S. java, S. cholerae, S. typhisuis, S. sendai, Escherichia coli, Clostridium perfringens, Cl. barati, Cl. sordellii. Cl. botulinum A-F, Cl., novyy A, B, C, D, Cl. septicum, Cl. chuvoei, Cl. hystoliticum, Cl. sporogenes, Cl. tetani, Brachyspira hyodysenteriaea, Brachyspira pilosicoli Arcanobacterium piogenes, Staphylococcus aureus, Streptococcus agalactiae, Lawsonia intracellularis.*

6. The compound for use according to any one of claims 2 to 5, for the treatment or prevention of a disease selected from the group consisting of: poultry enteric diseases, swine enteric diseases, bovine enteric diseases, as well as superficial treatments, for example ulcerative pododermatitis with necrotic dermatitis of poultry, mastitis of dairy cattle, metritis of dairy cattle, hoof lesions of ungulates, enteric and superficial diseases of other animals.

7. The compound for use according to any one of claims 2 to 6, for the inhibition of bacteria proliferating in the small intestine part of the digestive tract or on the surface of the skin and causing diseases therein, and/or for the prevention or treatment of diseases caused by said bacteria.

8. Method for preparing a feed additive, said method comprising admixing the compound according to claim 1, and further standard feed additive components.

9. Method for preparing a feed, said method comprising mixing the compound according to claim 1 into standard feed.

10. Use of the compound according to claim 1 in stock farming for increasing body-weight gain and/or increasing feed utilization and/or increasing egg yield and/or decreasing mortality in the population of poultry, preferably broiler or laying hen or turkey, and/or swine, preferably fatteners or piglets, and/or dairy cow.