



# NEKTON®

## PRODUCTS

*Successful as nature itself!*



**General Information on the  
NEKTON range for Birds**

## NEKTON-S

Multivitamin Supplement with Mineral Elements and Amino Acids for all Cage Birds

There are a number of nutritive substances that must permanently form part of the dietary intake if an animal is to receive the correct nutrition. The lack of any one of these vital ingredients can have serious consequences for an animal's health and possibly lead to its death.

Vitamins belong to these essential nutritional components. They are parts of enzyme systems that catalyse and regulate the metabolisms of the various nutrients (proteins, carbohydrates, fats) in the bird's organism, thus ensuring the smooth functioning of the bird's body.

A well-balanced diet covering all the nutritional requirements in number and quantity is particularly important for birds as they have a comparatively high metabolic turnover. According to reports from veterinarians, however, up to 90% of the ailments they treat in birds are due to an incorrect and inadequate diet, whereby the cause is not so much a lack of nutrients as a defi-

ciency in the active substances vitamins, macro and trace elements.

Not only do a bird's needs in nutrients fluctuate but so do the requirements in active substances, particularly in times of stress. The moult, breeding, re-caging, new companions, shows, illness and medical treatment with antibiotics and sulphonamides are all situations in which the body needs greater support to help the organism continue to function properly. At times like these, however, the supply of vitamins is often either insufficient or not available to the body in full, namely, a hypovitaminosis.

A hypovitaminosis is not easily recognised at first, but plumage problems during the moult and impaired fertility primarily result from these deficiencies. Any long-term deficiency will lead to considerable damage to a bird's health and finally to its death. A caring bird owner will therefore automatically ensure that his pet is given a good supply of these active substances to maintain its good health and performance as well as increase its resistance to illness and disease.

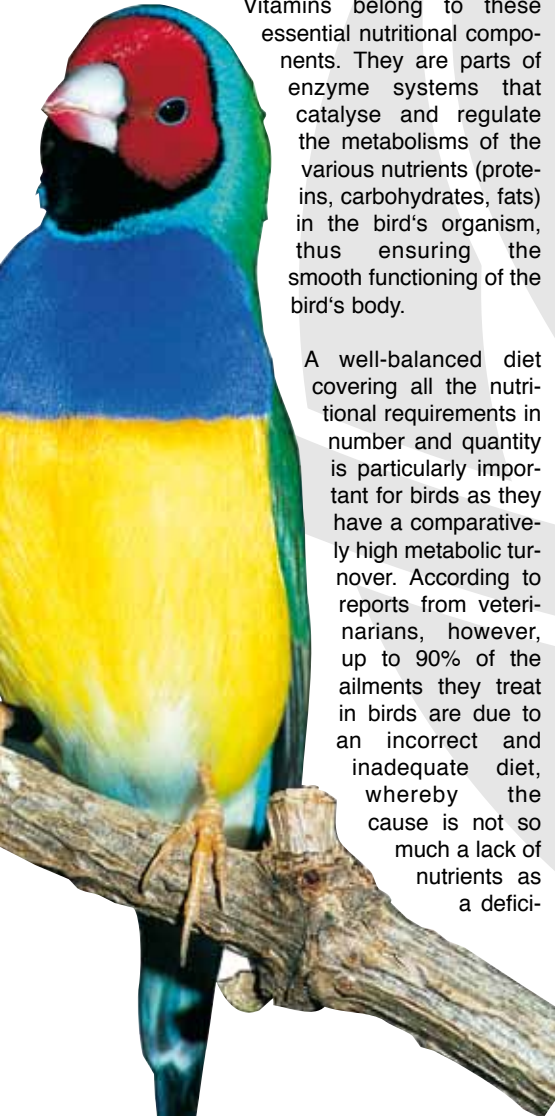
NEKTON-S provides birds owners with a food supplement especially formulated to suit these needs. Its well-balanced composition of vitamins, amino acids and minerals will help prevent deficiency diseases, complement the nutrients, improve their availability and utilisation and thus increase the nutritional value of the diet.

NEKTON-S increases a bird's resistance to disease and improves its productivity, especially during breeding.

Because of the all-round beneficial effect of NEKTON-S, aviculturists, bird parks and zoological gardens have chosen it as a daily supplement for their birds for years with success.

### Ingredients

Vitamins: Vitamin A, vitamin D3, vitamin E, thiamine, riboflavin, D-pantothenic acid, niacinamide, vitamin B6, folic acid, vitamin



B12, vitamin C, vitamin K3, biotin.

Macro/Trace Elements: Manganese / zinc / copper / iron / cobalt / iodine / calcium.

Amino Acids: L-alanine / L-arginine / L-aspartic acid / L-cystine / L-glutamine / L-glycine / L-histidine / L-isoleucine / L-leucine / L-lysine / DL-methionine / L-phenylalanine / L-proline / L-serine / L-threonine / L-tryptophan / L-tyrosine / L-valine.

## Usage

Being a powder soluble in cold water, NEKTON-S can easily be added to the drinking water or if preferred to the soft, moistened or egg food. Use NEKTON-S and NEKTON-E combined for even better breeding results.

## Summary

NEKTON-S is a pet food supplement formulated to provide cage birds with the proper supply of the vitamins, mineral elements, and amino acids required daily to prevent deficiencies arising.

NEKTON-S helps the smooth functioning of the entire metabolism and increases the nutritional value of food.

NEKTON-S strengthens body resistance, which helps a bird withstand pressure and reduces susceptibility to infection and diseases.

NEKTON-S improves a bird's general health and promotes proper functioning of all systems, particularly in breeding.

## NEKTON-E

A Vitamin E Supplement to Keep Birds Healthy and Aid Fertility

Vitamin E occurs in multiple forms in most plants, particularly in leafy grasses (dried grass meal) and in the oils extracted from plant seeds (germinating grain). Of all the

vitamin E forms in the plant kingdom alpha-tocopherol is the most potent, being much more active biologically than the other seven combinations and the most easily absorbed form - an important factor in animal nutrition. Another decisive factor is the latent lack of vitamin E which frequently occurs because grain feed loses most of its vitamin E effectiveness through drying, long exposure to the sun's rays, or long storage. In addition, during storage, unsaturated fatty acids can form substances which destroy the vitamin. That is the reason only the synthetically manufactured vitamin E acetate, which keeps its effectiveness for a long time and which the body changes into alpha-tocopherol, is used in animal nutrition.

Vitamin E plays a vital role in maintaining bodily functions and in the fertility of most animal species. It protects cellular structures, which ensures proper functioning of the cells in body tissues. It also takes over the job of disinfecting in the cellular metabolic process and is essential to cellular respiration, making it important to the energy metabolism. In addition, vitamin E plays a decisive role in the hormonal metabolic process and in forming and regulating the gonads (reproductive glands). A lack of vitamin E can cause degenerative changes in the muscular tissues (muscular dystrophy), weak heart muscles, liver damage and increased susceptibility to infectious diseases because of a reduced production of antibodies. A vitamin E deficiency can also harm the brain and red blood cell membranes.

For the aviculturist the most important factors of a vitamin E deficiency are naturally that it can cause reduced fertility in hens and sterility in males, and that considerably less eggs are fertilised. Some embryos die within 4-6 days after fertilisation; fully developed embryos are often too weak to break open their shells, and even hatched babies suffer from damaged muscles and nerves as a result of an inadequate vitamin E availability.

Not only is the amount of vitamin E actually present in bird food strongly influenced by





heat, light, storage and processing, as already mentioned, but a body weakened by stress, infectious diseases, medical treatment, intestinal troubles and parasites is unable to fully extract the vitamin E in the diet, meaning the dietary intake of this vitamin must be increased to ensure a proper supply.

Because of vitamin E's decisive influence on animal health and reproduction, NEKTON-E has been used regularly by numerous aviculturists for years and with great success.

## Ingredients

Vitamins: 50 000 mg vitamin E (per 1 000g).

Amino Acids: L-arginine / L-lysine.

## Usage

NEKTON-E should be given as directed to animals regularly at least three weeks before the breeding period begins. There is no danger of an overdose with toxic side-effects.

When the hen has started laying, discontinue the use of NEKTON-E. The continued use of „E“ during this period would cause a disruption of the hatching process because of an aroused mating instinct in the male.

NEKTON-E is composed of a special form of vitamin E. It should only be given together with other vitamins. Use it together with the multi-vitamin supplement NEKTON-S for the ideal combination when breeding birds.

## Summary

NEKTON-E is a pet food supplement consisting of the biologically effective and stable vitamin E form alpha-tocopherol.

NEKTON-E makes up for the deficiency of vitamin E in bird food and covers an animal's needs in this vital nutriment.

NEKTON-E protects the cell membranes, disinfects the cellular waste, promotes the synthesis of hormones and has a positive influence on the muscular system.

NEKTON-E encourages fertility in birds,

improves the survival rate of embryos and strengthens the viability of young animals.

NEKTON-E has a positive effect on the entire cellular metabolism and the production of antibodies, meaning improved immunity and resistance to disease.

**NEKTON-R**

**NEKTON-R-BETA**

**NEKTON-GELB**

Pet Food Supplements to Enhance Plumage Colours

Why is it that the plumage of birds living in the wild such as goldfinches, redpolls, crossbills or linnets is either just as brilliant or even more intensive in colour after the moult than before, while birds confined to the home (colour canaries, painted buntings etc.) generally fade to an insignificant muddy colour?

No doubt many bird lovers have asked themselves this question after finding their companions only shadows of their former selves, in spite of giving their pets the very best in bird seed. It is a popular myth, however, that certain species live entirely off seeds. If the diet has never been supplemented with greens or vitamins, trace elements and nutrients, their bird's plumage will automatically lose its brilliance and shine little by little after every moult. Eventually the red parts of the plumage have nothing in common with the colour red but are more a poor-looking, dull yellowish brown and the bird itself will begin to droop and lose its zest for singing.

Independent of the question of species-specific reactions we now know that the colours of the feathers have to do with the nutritional value of the food available and are connected directly with the intensity of the metabolism determined by the amount of free flight, whereby the general health of the bird is a decisive factor.

Feathers are given their colours by the deposits of carotenoids, red and yellow pigments/lipochromes, found in plants and the fatty tissues of animals. Although the deposits are minute they are spread over the whole surface of the feathers creating the various shades.

Carotenoids are the most widely distributed pigments in nature and are found in all parts of plants, even in the green parts, where they are overshadowed by the preponderance of green chlorophyll. The most important sources for carotenoids are carrots, palm oil, grass meal, Tagetes flowers, maize, saffron, and Paprika (peppers), among others.

An animal's organism is not capable of synthesising carotenoids itself, which means these colour pigments must form part of the dietary intake. They then enter the gastrointestinal tract in the form of the provitamin A, Beta-carotene, where they are converted to vitamins or colouring agents and absorbed by the body. Apart from this function as provitamin A, carotenoids also have a decisive influence on the gonads, growth, maturity, reproduction and brood care.

Animals show a marked degree of selectivity in the absorption and deposition of the carotenoids, but basically a bird's organism converts the yellow carotenoids in the diet into red pigments through oxidation, and these derivatives are chiefly responsible for the wide spectrum of the carotenoid colour palette. The pigments are then deposited in the keratin, the horny part of the feather, where they are protected from the destructive effect of oxygen and light. This can naturally only take place while the feathers are developing.

As the absorption of the ingested carotenoids can be reduced in the small intestine by a lack of dietary protein or by nitrates, these NEKTON products contain numerous amino acids to avoid such a deficiency. For the same reason we recommend that the bird owner provides his pet with a diet and drinking water low on nitrates.

Today carotenoids are produced by industrial methods, and the most important ones used as feed additives are:

Beta-Carotene  
Beta-Apo-8-Carotinal  
Canthaxanthin

These lipochromes are nature-identical and therefore completely harmless to an animal's organism, which is the reason they are used as colouring agents in a variety of foodstuffs such as margarine, cheese, lemonade, fruit juices, instant puddings and so on.

The natural red and yellow pigmenting effect of these lipochromes is the reason NEKTON has chosen them as colouring agents in their following products.

## NEKTON-R

NEKTON-R's secret is its canthaxanthin content. Canthaxanthin is the fatty pigment (lipochrome) most frequently found in the red feather parts. Thus NEKTON-R is based on a completely nature-identical carotenoid, which a bird's organism would normally form itself in the natural wild. After a regular dose of NEKTON-R all species with natural red parts in the plumage regain even and intensive colours as well as glossy, healthy plumage.

NEKTON-R is given shortly before and during the moult. The moult is a time of great strain on a bird's organism. Feather growth alone requires an abundant supply of vitamins, indispensable amino acids, minerals and trace elements. NEKTON-R has a well-balanced formula of all these essential nutritive and active substances to enable a bird withstand these pressures and produce a full, faultless and healthy plumage.

## Ingredients

Vitamins: Vitamin A, vitamin D3, vitamin E, thiamine, riboflavin, D-pantothenic acid, niacinamide, vitamin B6, folic acid, vitamin B12, vitamin C, vitamin K3, biotin.





Amino Acids: L-alanine / L-arginine / L-aspartic acid / L-cystine / L-glutamine / L-glycine / L-histidine / L-isoleucine / L-leucine / L-lysine / DL-methionine / L-phenylalanine / L-proline / L-serine / L-threonine / L-tryptophan / L-tyrosine / L-valine.

Macro/Trace Elements: Manganese / zinc / copper / iron / cobalt / iodine / calcium.

Carotenoid: Canthaxanthin

## Usage

NEKTON-R is in powder form and water dispersible, meaning it can be easily added to the drinking water (more practical for seed-eaters) or dusted over the egg/soft food. Begin using NEKTON-R as soon as the moult starts and continue until the bird has regained its plumage in full colour.

NEKTON-BIO can be used in addition to NEKTON-R for species with particular feather-growth problems during the moult. After NEKTON-R is no longer needed give your bird our multivitamin supplement NEKTON-S to help keep it healthy and free from infection.

## Summary

NEKTON-R is a special bird food supplement containing vital vitamins, numerous amino acids and a balance of macro and trace elements with the nature-identical fatty pigment canthaxanthin.

NEKTON-R boosts the red colouring in the plumage of such birds as goldfinches, linnets, redpolls, crossbills, house finches, red canaries, red siskins, painted buntings, cardinals, sun birds, ibises and flamingos.

NEKTON-R is a formula of highly effective substances to prevent a bird's colouring from fading and maintain the natural gloss and brilliance of its plumage.

NEKTON-R supports and strengthens the metabolism during moulting.

## NEKTON-R-BETA

The vitamin formula of NEKTON-R-BETA is enriched by a high percentage of Beta-Carotene, the naturally produced provitamin and most effective fatty pigment.

Beta-Carotene achieves a marked increase in the colour intensity of the red parts of the plumage in canaries, which is the reason NEKTON-R-BETA was primarily developed as a pet food supplement for colour canaries. Breeders and canary enthusiasts have been using this product during the moult and for a nestling's first set of real feathers with the greatest success for many years now.





Just how effective NEKTON-R-BETA is can be seen by comparing the content of this product with a natural dietary source of the carotenoid. If a breeder wanted to give his bird the same amount of beta-carotene as contained in a 1.23 ounce jar of NEKTON-R-BETA, he would have to feed it about 71 lb. of fresh green fodder or approximately 22 lb. of carrots.

In addition to enhancing colours in the plumage NEKTON-R-BETA is also extremely important during the moult and feather growth because of the vitamins and minerals it supplies. The pressure growing new feathers puts on bird's system is enormous and the active substance requirements increase correspondingly. NEKTON-R-BETA contains all these vital elements plus essential free amino acids to encourage feather growth.

## Ingredients

Vitamins: Vitamin A, vitamin D3, vitamin E, thiamine, riboflavin, D-pantothenic acid, niacinamide, vitamin B6, folic acid, vitamin B12, vitamin C, vitamin K3, biotin.

Amino Acids: L-alanine / L-arginine / L-aspartic acid / L-cystine / L-glutamine / L-glycine / L-histidine / L-isoleucine / L-leucine / L-lysine / DL-methionine / L-phenylalanine / L-proline / L-serine / L-threonine / L-tryptophan / L-tyrosine / L-valine.

Macro/  
Trace

Elements: Manganese / zinc / copper / iron / cobalt / iodine / calcium / magnesium.

Carotenoid: Beta-carotene

## Usage

NEKTON-R-BETA can be added to soft food or drinking water, whichever is the most convenient. As the feathers can only be influenced while they are growing in, begin adding NEKTON-R-BETA just prior to the moulting period or immediately after hatching and stop when the bird has a complete set of new feathers.

## Summary

NEKTON-R-BETA is a formula of many essential vitamins, numerous amino acids and a balanced combination of macro and trace elements enriched with the natural fatty pigment beta-carotene.

NEKTON-R-BETA serves to intensify colours in the plumage of coloured canaries and particularly enhances the natural red parts.

NEKTON-R-BETA aids the smooth change of feathers by means of its nutritive and effective substances and encourages full feather growth in young birds.

## NEKTON-GELB

The colouring agent in NEKTON-GELB is the yellow carotenoid chemically described as Beta-Apo-8 carotenoid acid ethyl ester. The high proportion of this synthesised carotenoid makes NEKTON-GELB an extremely effective means of heightening the colours and brilliance of a bird's plumage. The synthetic carotenoid is physiologically identical with the natural product and therefore harmless to a bird's organism, but is much more stable and preserves its effectiveness longer. It is bonded with and deposited in the keratin, the protein substance of the feathers.

Because of the high concentration of „Beta-Apo-8-Carotinal“ NEKTON-GELB is not only in a position to deepen



the colours and enhance the brilliance of the plumage, in particular the yellows, but also to bring back the colours fresh, strong and glossy in birds that faded a long time ago.

As with the other special products, this effect can only be achieved while feathers are growing in, that is during the moult and when babies are losing their down and getting their first set of feathers.

In order to help a bird through this time of pressure and strain and maintain health in general, which also reflects in full and shiny feathers, the carotenoid has been added to a basic formula of important vitamins, indispensable amino acids and a combination of macro and trace elements.

## Ingredients

Vitamins: Vitamin A, vitamin D3, vitamin E, thiamine, riboflavin, D-pantothenic acid, niacinamide, vitamin B6, folic acid, vitamin B12, vitamin C, vitamin K3, biotin.

Amino Acids: L-alanine / L-arginine / L-aspartic acid / L-cystine / L-glutamine / L-glycine / L-histidine / L-isoleucine / L-leucine / L-lysine / DL-methionine / L-phenylalanine / L-proline / L-serine / L-threonine / L-tryptophan / L-tyrosine / L-valine. Macro/Trace Elements: Manganese / zinc / copper / iron / cobalt / iodine / calcium / magnesium.

Carotenoid: Beta-Apo-8 carotenoic acid ethyl ester

## Usage

NEKTON-GELB is dispersible in water and can be administered via the drinking water or sprinkled over soft food. The plumage can, of course, only be influenced during moulting and when young get their first set of feathers. Start adding NEKTON-GELB when the bird begins to moult, or for nestlings immediately after they have hatched and stop when it has a completely new set of feathers.

Once the bird is in plumage in full colour use the pet food supplement NEKTON-S daily to strengthen and maintain good health.

## Summary

NEKTON-GELB with its nature-identical and harmless yellow carotenoid colouring agent prevents plumage colours from fading.

NEKTON-GELB enhances yellow shades in the plumage of yellow canaries, orioles, pigmy chickens, finch mutations (especially yellow lutinoes), as well as in all birds whose feathers contain carotene.

NEKTON-GELB aids the bird's entire organism during the moult and while rearing by means of its valuable composition of nutritive and active substances.

## NEKTON-BIO

Special Supplement to Help Improve Feathers

A bird's feathers have various functions. Its body feathers regulate the body heat, while the wing and tail feathers are needed in flight and to guide flight.

The bird's appearance and attraction are determined by its plumage, which can also protect it from enemies through plain colouring, or, of course, birds who have



little or no mating call have a distinctive and decorative feather dress to attract mates and avoid interbreeding among different types.

Whether in respect to a nestling's first set of feathers or a new set for a moulting bird, this is a highly complicated process which puts a great strain on the bird's entire organism. And as feathers make up 5% of the bird's whole weight and are largely protein in nature it is very important for the bird to get a well-balanced diet rich in protein and supplemented by vitamins and minerals when a new set of feathers is growing in. The majority of feather defects in cage birds are due to incorrect feeding. An incorrect diet is often the reason, too, that birds die during the moult, and not because of moulting disorders as many owners claim, but due to a lack of protein and/or vitamins, macro and trace elements.

A bird reduces the protein contained in the food into its different components (amino acids) and uses them to produce its own protein. It is therefore particularly important to give a bird an exact and well-balanced diet of all the indispensable and limiting amino acids to enable it to produce sufficient protein of its own.

Most cage or aviary birds are fed on bird seed and vegetable matter, which are not always in a position to cover a bird's protein requirements because of their unfavourable amino acid composition. This means that in stress situations such as during the moult, parasitic infestations, infections, etc., problems in the metabolic processes and feather growth arise and result in death in some cases.

This poor amino acid composition has been taken into account in the development of NEKTON-BIO. NEKTON-BIO contains not only 18 different free amino acids in the correct relationship, but all those vitamins necessary for feather growth as well

as a great variety of minerals, for these substances are also particularly important for the smooth functioning of all metabolic processes and therefore promote feather growth.

#### Ingredients

Vitamins: Vitamin A, vitamin D3, vitamin E, vitamin B1, vitamin B2, D-pantothenic acid, niacinamide, vitamin B6, folic acid, vitamin B12, vitamin C, vitamin K3, biotin.

Amino Acids: DL-Methionine / L-lysine / L-arginine / L-alanine / L-aspartic acid / L-cystine / L-glutamine / L-glycine/glycol / L-histidine / L-isoleucine / L-leucine / L-phenylalanine / L-proline / L-serine / L-threonine / L-tryptophan / L-tyrosine / L-valine.

Macro/Trace Elements: Calcium / zinc / manganese / copper / iron / cobalt / iodine / magnesium.

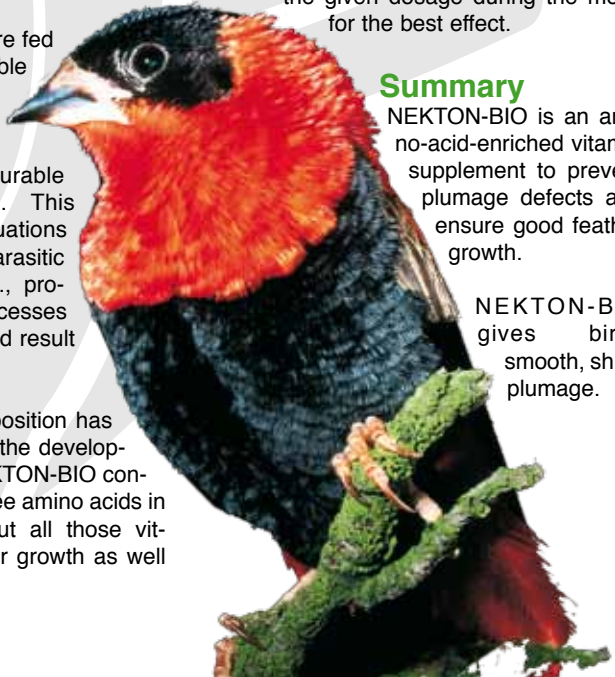
#### Usage

Being in powder form and soluble in cold water, NEKTON-BIO can be added to the bird's soft food or drinking water without any trouble whatsoever. Use NEKTON-BIO in the given dosage during the moult for the best effect.

#### Summary

NEKTON-BIO is an amino-acid-enriched vitamin supplement to prevent plumage defects and ensure good feather growth.

NEKTON-BIO gives birds smooth, shiny plumage.



NEKTON-BIO strengthens and supports a bird during the strain of the moult.

NEKTON-BIO helps prevent feather picking and eating due to a nutrient deficiency

## NEKTON-Q

Aid to Birds under Stress during Medical Treatment

The many years of manifold experience in our authorised quarantine station proved invaluable in the research and development that went into the multivitamin supplement NEKTON-Q, whose effectiveness has been recognised among experts for a long time now.

Imported birds in quarantine are under particularly heavy strain. Not only have they often been subjected to long and arduous transport before arrival and confronted by a completely new environment and climate, resulting perhaps in illness, they then have the added stress of obligatory medical treatment. We can frequently read reports in veterinary journals that the damage and disturbances caused by such measures affect the entire organism. Treatment by injections of antibiotics and sulphur drugs, in particular, produces bleeding in various tissues and

organs such as the hypodermis, muscles, intestines, duodenum, peritoneum and brain. It was this knowledge and experience that formed the basis for formulating NEKTON-Q and placing specific emphasis on the vitamins A, E and K.

The principle role of vitamin A in the body appears to be in the maintenance of the integrity of the epithelial cells. As such it regulates the metabolism of cell structure, strengthening the cell walls in all the tracts and hollows of the body such as the alimentary, respiratory, genito-urinary and reproductive tracts. This means an improved functioning of the cells and better resistance to infections due to an increase in the number of antibodies in the bird's organism.

Vitamin E is of outstanding importance for physical health in the situations mentioned above. It plays a vital role in protecting cell tissue thus ensuring proper functioning of the cells in body tissues. Vitamin E is also effective in disinfecting the cellular metabolic process and is necessary to cellular respiration, making it a principle factor in the smooth functioning of the energy metabolism. In addition, it is a vitamin which plays an important part in the body's immune system as well as in the hormonal metabolic process and in forming and regulating the gonads (reproductive glands). A vitamin E deficiency results in deleterious changes in the vascular and reproductive systems, muscles, brain and liver.

One of the perhaps most important factors in NEKTON-Q's great effectiveness is the amount of highly potent vitamin K3 it contains. Menadione, or vitamin K3 as it is commonly known, is extraordinarily important for proper coagulation of the blood. A deficiency results in slower coagulation, leading to internal bleeding. It is general knowledge that treatment with antibiotics and sulphonamides has a negative effect on the vitamin K production in the body, making an increase in the dietary intake necessary. In fact medical





treatment creates such a variety of detrimental side-effects for a bird's organism that a greater supply of the other vitamins must be made available as well.

NEKTON-Q has been formulated to ensure that a bird receives an adequate supply of these vitamins its organism needs during the strain caused by medical treatment. Apart from the vitamins mentioned above and vitamin C, a bird needs vitamin B2, B6, B12, biotin (vitamin H) and folic acid because of their interaction and considerable involvement in the intermediary metabolic processes. Furthermore amino acids and trace elements have been added to ensure a balanced support of nutritive and active substances.

## Ingredients

Vitamins: Vitamin A, vitamin D3, vitamin E, thiamine, riboflavin, D-pantothenic acid, niacinamide, vitamin B6, folic acid, vitamin B12, vitamin C, vitamin K3, biotin.

Amino acids: L-lysine / DL-methionine.

Trace elements: Manganese / zinc / copper / iron / cobalt / iodine.

## Usage

NEKTON-Q in powder form is so easy to use. Just add to the drinking water or soft food.

NEKTON-Q is intended for use on birds with an imbalance in the blood picture because of such situations as quarantine, under treatment with antibiotics or sulphonamides, or for such species needing an increased supply of vitamin K3 (e.g. Fig Parrots). For normal health and condition maintenance use NEKTON-S.

## Summary

NEKTON-Q is the dietary supplement for use on birds in importers' quarantine stations or in the quarantine rooms of breeders or pet dealers.

NEKTON-Q has been formulated as a suc-

cessful support to birds under quarantine stress and medical treatment, particularly during the detrimental effects of antibiotics and sulpha drugs.

NEKTON-Q supplies the increased vitamin requirements during quarantine and helps a bird overcome the pressures better.

NEKTON-Q is enriched with vitamins A, E and K to lower the risk of damages to a bird's organism and protect the epithelial tissues, cell walls and cellular metabolism, making it a considerable aid to reducing danger of bleeding in animal tissues and organs.

## NEKTON-B-KOMPLEX

The NEKTON-B-KOMPLEX has been formulated to combine and blend the various members of the vitamin B complex to a valuable and highly effective supplement for all kinds of birds.

The vitamin B group is important to the organism and its maintenance and is found both in animal and plant tissues. In many cases, however, a mixed bird food is still deficient in these essential vitamins so that birds require a dietary source.

Each member of the B vitamins takes part in a particular and vital type of reaction in the organism and is important for its maintenance. They participate in a number of types of chemical reactions, most of which effect the transfer of energy. Hence they play a key role in the metabolism of proteins, fats and carbohydrates. In addition they are involved in the regular functioning of the gastrointestinal system, nerve functions and the myocardial tissues. Some of the B vitamins aid the formation of red blood cells and antibodies and most are necessary for a healthy skin.

Consequently, a deficiency of these essential substances reveals itself in a variety of health problems. The most serious consequences of a B group deficiency are disturbances of the nervous system, skin diseases and reproductive disorders. This is particu-

larly obvious in retarded growth, curled toe paralysis, leg weakness, diarrhoea, anaemia, poor feathering, scaly dermatitis around feet and beak, reduced egg clutches, higher mortality rate among embryos, poor egg hatchability and so on.

In spite of the great variety of pet foods offered today, most of them are deficient in the majority of the vitamins contained NEKTON-B-KOMPLEX, some of them up to 80% below requirement level. That is the reason for this special-purpose supplement.

Requirements for B vitamins increase proportionally to the protein content of the food and are particularly high during treatment with antibiotics and sulpha drugs. This determines the usage and dosages of NEKTON-B-KOMPLEX combined with NEKTON-S.

## Ingredients

Vitamins: Thiamine,  
Riboflavin, Niacinamide,  
D-Pantothenic-Acid,  
Vitamin B6, Vitamin  
B12, Folic Acid.



## Usage

Water-soluble NEKTON-B-KOMPLEX in powder form is extremely simple to use. It can be added to either the drinking water or soft food.

NEKTON-B-KOMPLEX has been especially formulated for use in cases of stress such as treatment with antibiotics and sulphonamides, and as a crash therapy to cover particular requirements in the B vitamins. There should be long intervals between administration. For normal daily conditioning and health maintenance use NEKTON-S.

## Summary

NEKTON B-KOMPLEX consists entirely of vitamins and is an ideal combination of all physiologically important B vitamins.

NEKTON B-KOMPLEX is formulated to meet the requirements of a bird's organism in times of extreme stress.

NEKTON B-KOMPLEX alleviates the effects of a vitamin B deficiency, prevents metabolic disturbances, regulates important processes in the body and helps against neurological disorders.

NEKTON-B-KOMPLEX promotes healthy skin, improves feathering and supports fertility by producing better incubation, reducing embryonic mortality and increasing hatchability.

## NEKTON-MSA

High-Grade Mineral Supplement for Pets

Mineral elements are extremely important for maintaining good health, top stamina and uninterrupted reproduction.

Macro and trace elements are essential, in fact vital, components in the diet for an animal's metabolism. As they are repeatedly secreted by the body, they must be replenished constantly by means of the food.

As the name TRACE ELEMENTS suggests, only minute traces of these mineral elements are needed, whereas macro or quantitative elements, can make up 0.1% - 2% of the dry matter in food. The most important factor either in respect to diets or food supplements is not only the number of individual substances but, above all, their well-balanced and well-matched composition. For example, it is a comparatively well-known fact that calcium and phosphorus have a complex relationship with each other and in correlation to one another can prevent rickets and osteomalacia. In general a Ca-P ratio of 2:1 is regarded as ideal, but, of course, cannot apply to all species. In the case of the female bird of a species which lays a comparatively large number of eggs each time a ratio of 3:1 is more beneficial. Because of this, a large proportion of vitamin D3 has been added to NEKTON-MSA, as this vitamin is able to attune the Ca-P ratio to the requirements of each individual organism to a certain extent. Even when the dietary supply of these minerals is more than adequate vitamin D3 encourages a better calcium and phosphorus deposit in the animal's bones.

The relationship between the various macro and trace elements is highly complicated and sophisticated. For example, too much calcium in the organism has a negative effect on the zinc balance, as does an overdose of potassium in the food on the magnesium content. Thus an abnormal supply in quality and quantity of the various macro and trace elements can lead to health disorders and impaired functions in the body. Now we can see how vital it is for the diet to contain a balanced blend of the correct mineral elements required by an animal's organism. Macro, trace elements, and, of course, vitamins and amino acids must complement and support each other.

With this in mind we have composed NEKTON-MSA, an ideal means of providing your pet with the benefit of all these essential substances.

## Ingredients

Vitamins: Vitamin D3.

Amino Acids: L-lysine / DL-methionine.

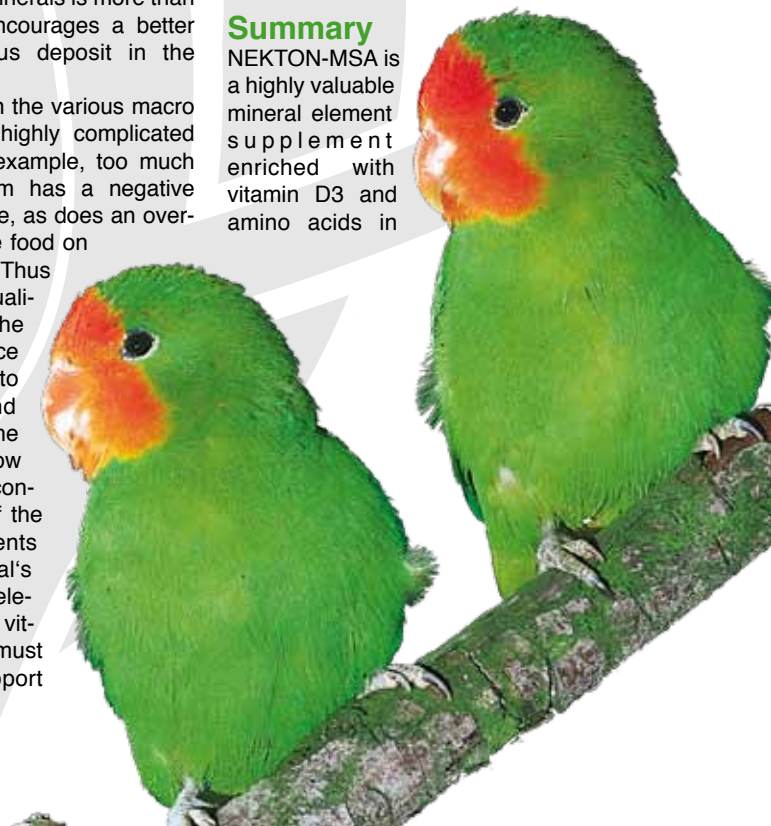
Macro/Trace Elements: Manganese / zinc / copper / iron / cobalt / iodine / calcium / phosphorus.

## Usage

NEKTON-MSA is mainly intended for all brooding animals, for an animal needs more minerals and trace elements at such times. An increased dose of calcium reduces the fragility of cage-birds' eggs. It has been proved that NEKTON-MSA can help improve bone formation in animal suffering from a lack of calcium or while raising young.

## Summary

NEKTON-MSA is a highly valuable mineral element supplement enriched with vitamin D3 and amino acids in



powder form intended for administration with pet food.

NEKTON-MSA helps support metabolic processes in an animal's organism.

NEKTON-MSA promotes bone and teeth growth.

NEKTON-MSA helps protect against interruptions in the adsorption improves resistance to infections.

NEKTON-MSA activates important enzymatic systems.

NEKTON-MSA prevents fur or feather disorders due to mineral deficiencies.

NEKTON-MSA supplies breeding and young animals with essential trace elements and minerals.

## NEKTON-TONIC

The name NEKTON-TONIC covers 4 highly potential tonics, specifically balanced and blended to meet the nutritional needs of the following types of birds and reptiles:

### NEKTON-TONIC-F

for fruit-eating birds

### NEKTON-TONIC-K

for seed-eating birds

### NEKTON-TONIC-I

for insect-eating birds

### NEKTON-TONIC-R

for nectar and fruit-feeding reptiles

The main value of NEKTON-TONIC as a supplement is that the majority of the more than 60 nutritive and effective substances it contains are in free form, meaning they are immediately and easily absorbed in full by the animal's body without having to be digested and degraded first and burdening the animal's organism .

The variety and combination of these ingredients make the NEKTON-TONIC series to valuable tonics for strengthening and building up an animal's organism. Heading the list of nutritive and effective substances are the amino acids and vitamins as well as macro and trace elements. The effectiveness of the NEKTON-TONIC products lies in their species-specific formulas which ensure full availability, immediate utilisation and correct physiological functioning and interaction of the components.

One of the primary sources of energy in the NEKTON-TONIC products are the proteins. The proteins in NEKTON-TONIC are already in their digested form, namely, free amino acids. Almost all the amino acids and especially the indispensable ones are contained in these supplements so that the entire protein requirements for these animals are covered. Parallel to the protein the nitrogen-free compounds carbohydrates and fatty acids are on hand to supply mechanical and heat energy.

At the same the NEKTON-TONICs fortify normal diets with a balanced combination of the particular vitamins required by each species.

The importance of a wide variety of mineral elements for the construction of certain tissues and proper bodily functions has also been taken into account and the formulas enriched with an adequate supply.

All these nutritive and active substances together the other components in NEKTON-TONIC ensure that the organism can utilise the health-maintaining, increasing and restoring proper-ties immediately. Complete in nature, these products enable an animal to produce its own enzymes and hormones, which are necessary for the smooth functioning of all body functions.

The result is a complex and sophisticated formula to round off normal pet food diets and therefore prevent deficiency symptoms, regulate processes in the organisms and activate body functions.



This makes NEKTON-TONIC particularly valuable during such stress periods as moulting (skin sloughing), re-caging and acclimation, shows, etc., and has proved an excellent help in raising young animals. The TONIC products have the added advantage of being useful as diets as well as supplements.

## Ingredients

**Vitamins:** Vitamin A, vitamin D3, vitamin E, thiamine, riboflavin, D-pantothenic acid, nicotinamide, vitamin B6, folic acid, vitamin B12, vitamin C, vitamin K3, biotin.

**Amino Acids:** L-alanine / L-arginine / L-aspartic acid / L-cystine / L-glutamine / L-glycine / L-histidine / L-isoleucine / L-leucine / L-lysine / DL-methionine / L-phenylalanine / L-proline / L-serine / L-threonine / L-tryptophane / L-tyrosine / L-valine.

**Macro/Trace Elements:** Manganese / zinc / copper / iron / cobalt / iodine / calcium / phosphorus.

## Usage

NEKTON-TONIC is in powder form and water soluble. NEKTON-TONIC can be sprinkled over moistened soft food or given as liquid nutrition.

It should be given two or three times a week regularly to prevent deficiency symptoms but can be given daily for a short time during stress periods.

When hand-raising young birds the

solution can be fed into the beak by using an eye-dropper or straight into the crop by means of a tube or needle. As soon as the birds are weaned onto a spoon, 10-15 days old, a certain amount of roughage should

be added.

Tips from our clients

Many bird breeders feed their birds on pure NEKTON-TONIC-K. The NEKTON-TONIC-K powder is just poured into a separate bowl or sprinkled onto a sheet of glass for the birds to peck at. Mountain Parakeets have proved to be very fond of NEKTON-TONIC-K this way.

Grey parrots, amazons and cockatoos settle down easily and fast without the usual acclimation difficulties when given soft, moistened maize covered with a dose of NEKTON-TONIC-K.

NEKTON-TONIC-K should be given to imported or new birds and NEKTON-Q added to the drinking water. Acclimation is faster and the birds soon reach peak condition.

Foreign siskins, particularly the sensitive types like black siskins and black-chinned siskins enjoy a diet of egg, insects (meal worms) and NEKTON-TONIC-K.

NEKTON-TONIC-R sprinkled over greens or fruit has proved very successful in such reptiles as green iguanas, for example.

## Summary

NEKTON-TONIC is a valuable supplement in four different formulas to suit the individual needs of fruit-eating birds (NEKTON-TONIC-F), seed-eaters



(NEKTON-TONIC-K), insect-feeding birds (NEKTON-TONIC-I) and nectar/fruit-taking reptiles (NEKTON-TONIC-R).

NEKTON-TONIC with its combination of over 60 nutritive and effective substances covers all the nutritional requirements these animals need.

NEKTON-TONIC's ingredients are immediately absorbed and available to the body.

NEKTON-TONIC is an effective aid to preventing vitamin and mineral deficiencies, regulating physical processes and activating body functions.

NEKTON-TONIC gets pets into top condition and helps support all systems in times of stress.

Let NEKTON products help you enjoy your birds better and give them the best living conditions in captivity.

## NEKTON-T

Multi-Vitamin Supplement for doves, containing Amino Acids and Trace Elements

NEKTON-T is a vitamin supplement which has been especially developed with doves, poultry, pheasants, etc., in mind.

It is the result of many years of experience in treating cage birds.

NEKTON-T contains all those substances considered necessary to a dove's health, namely 13 vitamins, 6 trace elements, calcium as well as 2 amino acids.

Vitamins are the vital organic substances contained in plants that the body needs regularly in small doses. They are essential factors for first-class functioning of the metabolism, for growth, performance and health. Each vitamin has a certain job that only it, and no other vitamin, can do.

NEKTON-T contains a particularly high percentage of vitamin E and biotin (vitamin H).

Vitamin H was discovered comparatively late, but there is no doubt today of its important role in keeping animals healthy. Biotin influences not only growth and viability but also improves skin and plumage. It encourages the growth of leg bones, fertility, laying and the size of broods. The biotin content in the feed of breeding birds may have considerable all-round effect on the resulting young.

Deficiencies in vitamin E often result in infertile eggs, dead embryos or young too weak to live. A lack of vitamin E can also cause muscular dystrophy, which strikes the whole muscular framework as well as the heart and stomach muscles. Dove fanciers, therefore, are advised to start using NEKTON-T regularly from the very beginning, namely when rearing, and not to wait until the bird is fully grown.

The calcium in NEKTON-T is important for stronger bones and eggshells and for improved growth, especially in young birds. Enough trace elements and minerals, both essential factors for a bird's well-being, are also to be found in NEKTON-T.

A daily ration of NEKTON-T helps you to keep your birds strong and healthy.

It is particularly helpful in warding off rickets and promoting growth, easy moulting, fertility and laying and helps make up for any defects in a poorly balanced diet.

(Please note: Concerning the administration of vitamins during treatment with antibiotics or sulphonamides, please also read our product description for NEKTON-Q very carefully.)



NEKTON-T promotes health and helps to improve performance and supports the organism during the racing season. Given to your racing pigeons upon their return during the racing season, will help them to achieve a better condition and recover within a short period of time.

NEKTON-T has particularly proved its worth in cases of illness. A bird needs an increased ration of vitamins while receiving antibiotics, sulphonamides etc., if it is to overcome the negative effect of these chemical compounds on intestinal bacteria.

NEKTON-T is a powder soluble in cold water and therefore the ideal method of supplementing your bird's diet.

## Ingredients

Vitamin A, Vitamin D3, Vitamin E, Vitamin B1, Vitamin B2, Calcium-D-Pantothenate, Nicotinamide, Vitamin B6, Folic Acid, Vitamin B12, Vitamin C, vitamin K3, Vitamin H, Amino Acids  
L-Lysine  
L-Methionine

Minerals-Trace Elements

Manganese, Zinc, Copper, Iron, Cobalt, Iodine, Calcium, Phosphor

## DESI-PLUS

Sterilizing Bath for Pet Food – and Drinking Vessels

DESI-PLUS helps protect against stomach upsets

DESI-PLUS helps to prevent infectious diseases from spreading

DESI-PLUS helps guard against fungus infections

DESI-PLUS helps keep pets healthy

DESI-PLUS is a final disinfectant for pet toys

and vital for pet feeding and drinking vessels. Logically, our dear pets whether dogs, cats, hamsters, mice, rabbits, guinea pigs or birds come in contact primarily with their feeding or drinking bowls or dispensers, and it is therefore extremely important that these vessels are as clean and germ-free as possible, if we want to keep our pets healthy.

Unfortunately the usual methods of cleaning these utensils are just not enough to ensure that they are really sterile, and as they are generally made of plastic, they cannot be boiled.

In order to achieve full results, meaning 100% germ-free, in taking as little time as possible, NEKTON Products has developed the special disinfectant DESI-PLUS.



# NEKTON®

## PRODUCTS



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Obtainable from

