



# How To Read Supplement Labels

Because We Care About Your Quality of Life...

## Which supplement would you choose? A or B?

### Label A Supplement Facts

Serving Size 1 Capsule

Amount per capsule	%DV
<b>Vitamin C</b> (from acerola cherry) . . . . .	20 mg . . .33%
<b>Vitamin A</b> (from Wild yam) . . . . .	174 IU . . .4%
<b>Calcium</b> (as calcium chelazome) . . . . .	25 mg . . .2%
<b>Iron</b> (as Ferrochel™) . . . . .	0.5 mg . . .2%
<b>Chromium</b> (as chromium chelavite) . . . . .	3 mcg . . .2%

**Proprietary Enzyme Blend** . . . . .90 mg . . . . \*

Amylase, 3000 DU; Protease, 10,000 HUT; Glucoamylase, 5 AGU; Acid Stable Protease, 10 SAPU; Lipase, 100 FCCLU; Cellulase, 100 CU; Invertase, 0.1 IAU; Peptidase FP, 1000 LAPU; Lactase, 100 ALU.

**Proprietary Probiotic Blend** . . . . .112 mg . . . . \*

*Lactobacillus acidophilus*, 500 million CFU; *L. bulgaricus*, 100 million CFU; *L. plantarum*, 100 million CFU; *L. salivarius*, 100 million CFU; *enterococcus faecium*, 100 million CFU; *L. reuteri* 20 million CFU; *L. lactis*, 20 million CFU; *L. brevis*, 20 million CFU; *Bifidobacterium longum*, 20 million CFU; *B. bifidum*, 20 million CFU.

**Proprietary Vitamin Blend** . . . . .288 mg . . . . \*

Vegetarian Yeast, Acerola 1:4 ext., Safflower Oil (seed), Brewers Yeast, Alfalfa Juice concentrate, Wheat Germ, Bitter Orange Peel, Green Pepper, Pine Park Proanthocyanidin, Grape Seed Extract

### Label B Supplement Facts

Serving Size 1 Tablet

Amount per capsule	%DV
<b>Vitamin C</b> (ascorbic acid) . . . . .	240 mg . . .600%
<b>Vitamin A</b> (retinoic acid) . . . . .	2000 IU . . .54%
<b>Calcium</b> (calcium ascorbate) . . . . .	1200mg . . .100%
<b>Iron</b> (Ferrous sulfate) . . . . .	10 mg . . .83%
<b>Chromium</b> (chromium picolinate) . . . . .	200mcg . . .170%

**Enzyme Blend**

**Amylase** . . . . .40 mg . . . . \*

**Chymotrypsin** . . . . .15 mg . . . . \*

**Trypsin** . . . . .15 mg . . . . \*

**Lipase** . . . . .60 mg . . . . \*

*Lactobacillus acidophilus* . . . . .500 million CFU . . . . \*

*Bifidobacterium longum* . . . . .40 million CFU . . . . \*

*Bifidobacterium bifidum* . . . . .40 million CFU . . . . \*

## The better supplement is Supplement A, but do you know why?

Thousands of people take supplements everyday, but few people know what is actually in the supplement they're taking. Because manufacturers and distributors of nutritional supplements do not need to register with the FDA or get FDA approval before producing or selling dietary supplements, you, as the consumer, need to be educated about the product you are purchasing. In order to know what's in the supplement, you must first know how to read and interpret the information presented on the label.

The FDA now requires that vitamins and other dietary sup-

plements include labels similar to those found on all commercial foods. The labels include nutrient information and list all the ingredients including identifying parts of plants from which ingredients may be taken, but the quality of the supplement is not evaluated by the FDA. It is the manufacturer's responsibility to make sure that all the dietary ingredients in the supplement are safe and to make sure the label information is truthful and not misleading. However, even when the information is not intended to be misleading, it can still be very confusing if you don't understand the basic terminology. The information provided here will help you to read and understand the important information provided on the label.



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A key part of the new supplement label is the Supplement Facts section where specific nutrients are listed as amounts and as a percent of the Daily Value (%DV). But what is the Daily Value and how is it calculated?

The Daily Values are standard values developed by the Food and Drug Administration (FDA) for use on food and supplement labels. The Daily Values were created based on two sets of reference values, the DRI and the DRV. The DRI (Dietary Reference Intakes) are the food label values for protein, vitamins, and minerals based on population-adjusted means of the RDA (Recommended Dietary Allowances). The DRV (Daily Reference Values), are food label values for nutrients and food components (such as fat and fiber) that do not have an RDA value but do have important relationships with health. Together, the DRI and DRV make up the Daily Values used on food and supplement labels.

The RDAs used to calculate the DRIs and the DVs (Daily Values) were originally designed in the 1940's for the purpose of providing war rations that would provide adequate nutrition to keep military personnel from becoming deficient in these nutrients. These values were determined using laboratory experiments (and military experiments) to ascertain the amount of a synthetically created nutrient that is required to prevent or correct a nutrient deficiency. These values were then adjusted according to how well the nutrient used in the experiment was absorbed. For example, the iron (Fe) requirement for adult males is calculated as follows:

Males lose 1.0 mg of iron each day that must be replaced or iron deficiency anemia will occur. The type of iron used in the experiments was ferrous sulfate which has a 10% absorption rate. Therefore the RDA was set at 10 mg per day for men. For adolescent males the RDA is 12 mg/day, for premenopausal women 15 mg, and for pregnant women 30 mg. The Daily Value is then calculated based on the average of the requirements for the various subgroups of the population, which for iron is 12 mg/day.

Iron found in a supplement or food will be listed on the label as a percentage of the Daily Value of 12 mg/day. If a supplement contains 6 mg of iron it will be listed as 50% DV regardless of whether that form of iron has a 10% absorption rate or a 100% absorption rate.

As you can see, the labels do not tell you much about the biological daily value of the nutrient you are ingesting. The labels do not take into consideration that the absorption of the nutrient in that particular supplement may be higher (or lower) than the form of the nutrient used to calculate the daily value. The labels also do not consider the biological activity or possible side effects of the nutrient listed. For example, ferrous sulfate is the most commonly used form of iron in supplements, but is very poorly absorbed (10% absorption). The small amount of iron that is absorbed from ferrous sulfate is not well utilized by the body. In contrast, the amino acid chelated form of iron, Ferrochel™ has a 70 to 75% absorption rate, which is much higher than ferrous sulfate. This means that a supplement containing 5 mg of iron as Ferrochel will actually supply 3.5 to 3.75 mg of iron to the body. This is three times the amount required to replace the iron losses and pre-

vent anemia in males even though it is listed as only 50% of the Daily Value. Ferrochel is in a form that is more readily used by the body and is many times more effective than ferrous sulfate. In addition, Ferrochel is the only iron that has been granted GRAS status (Generally Regarded As Safe) by the FDA. All other forms of iron have potential side effects ranging from intestinal distress and constipation, to oxidative damage of red blood cells and toxicity leading to death. Ferrochel will not cause poisoning in children the way other iron supplements can.

Rather than looking only at the milligram amounts of nutrients and the percent daily value (%DV), it is important to determine the quality of ingredients included in a supplement. The following information will help you to understand which ingredients are the most beneficial to the body.

## VITAMINS

Avoid synthetic vitamins (e.g. beta-carotene, pyridoxine hydrochloride, retinol, palmitate, pteroylglutamic acid, thiamin mononitrate, thiamin hydrochloride, ascorbic acid). Instead look for natural whole food vitamins that use names of foods you can recognize such as green pepper, wheat grass, brewer's yeast, soybean, alfalfa, or acerola cherry.

**Units Seen on the Label:** mg = milligrams, IU = International Units. Individual nutrients are usually listed with the mg amount or IU for the nutrient, whereas whole food ingredients are usually listed in a "Proprietary Blend" with the total mg of the blend listed.

## Common Types of Vitamins Used in Supplements

• **Crystalline:** Means it had a natural food as its original source but was treated with various high powered chemicals, solvents, heat and distillations to reduce it down to one specific pure crystalline vitamin or amino acid and hence is no longer natural. It no longer has its synergistic components, that is, its enzymes, coenzymes, minerals, mineral activators, and co-vitamin helpers. It has been reduced to a pure crystalline powder with one definite simple chemical structure. In this form it is but one simple phase of the complete VITAMIN COMPLEX.

• **Synthetic:** Means that in the laboratory the scientist has reconstructed the exact structure of the CRYSTALLINE molecule by "putting together" or chemically combining the same molecules from other sources. On the label for either synthetic or crystalline vitamins, only the chemical name of the single vitamin is usually given. Legally it is not necessary to give the sources from which the synthetic chemical is derived.

• **Natural:** Natural means vitamins as found in natural foods untampered with in anyway that might change their molecular, their biological or biochemical combinations, or their action. This usually means that only the fiber and moisture are removed. The natural vitamins and other nutrients are still intact as nature intended.

All labels of truly NATURAL food concentrates should indicate the exact food source from which the vitamin is obtained. Natu-



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## Vitamins Sources Most Frequently Found in Supplements

Item	Natural:	Synthetic or Crystalline:
<b>Vitamin A Complex</b>		
Vitamin A	Dunaliell Salina, Carrot Powder, Spirulina, Chlorella, Fish Oil, Sweet Potatoes, Carrots	Retinol, Palmitate, Acetate
<b>Vitamin B Complex</b>		
Vitamin B1	Vegetarian Yeast, Brewer's Yeast, Blackstrap Molasses, Wheat Grass, Beans	Thiamin Mononitrate, Thiamin Hydrochloride
Vitamin B2	Vegetarian Yeast, Brewer's Yeast, Blackstrap Molasses, Wheat Grass	Riboflavin
Vitamin B6	Vegetarian Yeast, Brewer's Yeast, Blackstrap Molasses, Wheat Grass	Pyridoxine Hydrochloride (usually from coal tar)
Vitamin B12	Vegetarian Yeast, Brewer's Yeast, Blackstrap Molasses, Wheat Grass	Streptomycin Fermentation, Cyanocobalamin
Folic Acid	Vegetarian Yeast, Brewer's Yeast, Blackstrap Molasses, Wheat Grass, Nuts	Pteroylglutamic Acid
Pantothenic Acid	Vegetarian Yeast, Brewer's Yeast, Blackstrap Molasses, Wheat Grass	Calcium Pantothenate
Choline	Soybean, Wheat Grass, Barley Grass	Choline
Inositol	Soybean, Wheat Grass, Barley Grass	Reduced from corn, Inositol
Biotin	From Liver, Wheat Grass, Barley Grass, Beans	d-biotin
Nicotinic Acid	Vegetarian Yeast, Brewer's Yeast, Blackstrap Molasses, Wheat Grass, Beans	Niacin, Nicotinate
Para-aminobenzoic Acid	Vegetarian Yeast, Brewer's Yeast, Blackstrap Molasses, Wheat Grass	Para-aminobenzoic Acid
<b>Vitamin C Complex</b>		
Vitamin C	Citrus Fruit, Acerola Cherry, Green Pepper, Chickweed	Ascorbic Acid (usually from fermented corn chemically changed)
<b>Vitamin D Complex</b>		
Vitamin D	Fish Oil, Shitake Mushroom	Irradiated Ergosterol, Cholecalciferol
<b>Vitamin E Complex</b>		
Vitamin E	Wheat Germ Oil, Rice Bran, Safflower Oil	Alpha Tocopherol, Mixed Tocopherols
<b>Vitamin K Complex</b>		
Vitamin K	From Alfalfa, Wheat Grass, Menadione Barley Grass, Spinach, Cauliflower	

**NOTE:** The synthetics are so much cheaper to produce that they have actually replaced most crystallines. Only a few crystallines are used, such as B12, alpha tocopherol and inositol.

**NOTE:** Legally, crystalline can be called natural because it was isolated from a natural product, but it is NOT NATURAL as herein described.



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rals are much more expensive because they are perishable and every precaution must be taken to preserve their **LIFE** and **INTEGRITY**. Synthetics are “dead”, inert, cheaper and present much less expensive handling problems. As with any inert material, greater mass production creates cheaper bargain prices. Whenever possible, natural whole-food supplements are preferable to synthetic or crystalline forms of vitamins.

**COMMENT:** Every factor needed in human nutrition that has ever been isolated by scientific man from any vegetation is found in the cereal grasses (e.g. wheat grass, barley grass, etc). These natural potencies contained within the grasses are infinitesimal compared to synthetics or crystallines, but they are in nature’s own balance. They carry their own synergists (minerals, mineral activators, enzymes, coenzymes, amino acids, vitamins, etc.), all closely balanced and bound together by nature. They are “alive” and ready to function without chemically upsetting nature’s delicate balance in the human body. They are not a man-made chemical or drug.

## MINERALS

Look for amino acid chelated minerals (e.g. chromium chelavite, magnesium chelazome) that are easily identifiable by their suffix of chelavite, chelate or chelazome. Avoid minerals that claim to be ionic or colloidal or are listed as mineral salts or oxides (e.g. magnesium chloride, zinc oxide).

**Units Seen on the Label:** mg = milligrams or mcg = micrograms. There are two different ways that minerals (such as calcium, iron, etc) are listed on bottles: in the combined form (such as magnesium chelate, or magnesium chloride) or the elemental form (the actual amount of the minerals minus whatever they are combined with).

## Common Types of Minerals Used in Supplements

- **Mineral Salts:** Most minerals used in supplements are in the form of mineral salts. They will be listed on the label as the mineral followed by a salt compound such as sulfate, carbonate, or chloride. (i.e. calcium carbonate, ferrous sulfate, chromium chloride). Mineral salts are poorly absorbed and often cause gastrointestinal distress.
- **Mineral Oxides:** Mineral oxides are even less well absorbed than mineral salts. Less than 1% of the mineral combined with an oxide is actually usable to the human body. Any mineral combined with an oxide is only slightly more useful than licking the side of an aluminum building. They are usually listed on the label as the mineral followed by “oxide.” (i.e. zinc oxide).
- **Colloidal Minerals:** Colloidal minerals have become a pop-

ular form of mineral supplement in recent years. Colloidal minerals are minerals that have been suspended (not dissolved) in a liquid medium. Contrary to most of the claims, there is no scientific evidence to support that colloidal minerals are absorbed any differently than mineral salts. Colloidal minerals exist in particle sizes many times larger than other mineral forms, which makes them difficult to absorb.

- **Chelated Minerals:** Amino acid chelated minerals are minerals attached to an amino acid. By binding the mineral to an amino acid, the mineral can be absorbed more easily and it is more readily used in the body. Albion Laboratories is the only company that holds a patent on this process. There are other chelation processes and companies claiming to use chelated minerals. However, only the chelation process used by Albion Laboratories is effective. It is the only process that involves bonding an amino acid to a mineral in the same way nature does and is the only way to produce this natural amino acid-mineral complex. Chelated minerals can be recognized on the label by looking for the suffix –chelate, chelavite, or chelazome

## HERBS

Many herbal supplements have begun to use “standardized extracts”. A standardized extract simply means that the manufacturer has extracted the portion of the herb that is believed to be the active ingredient. For thousands of years herbal medicine has used the whole herb because of the natural balanced effects it provides. Until modern science can catch up with the years of experience provided by traditional herbal medicine, it is better to choose an herb that uses the whole herb, or includes the whole herb in addition to the extract.

## ENZYMES

Look for a plant enzyme supplement and avoid pancreatic or animal enzymes. Be sure that the supplement label uses FCC units, such as LU, DU, CU rather than milligrams on the label. Also be sure the supplement is in capsule or powder form. The enzymes are destroyed by the pressure and heat required to make a tablet.

**Units Seen on the Label:** Some companies indicate enzyme potency in milligrams. While this may look impressive on the label, it is actually meaningless. Enzyme effectiveness depends on activity, not on weight. The system for determining enzyme potency used by the American food industry is derived from the Food Chemical Codex (FCC) and is accepted as the standard by the FDA. The activity of enzymes such as protease, lipase, amylase, etc. can be expressed in units, which are well defined by the FCC. The label should show the following units for these common enzymes: Protease = HUT, Amylase = DU, Lipase = LU, Cellulase = CU, Sucrase = IAU, Lactase = LacU, Maltase = Dpo.

## Common Types of Enzymes Used in Supplements



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- **Pancreatic Enzymes:** Pancreatic enzymes are from an animal source and are not found naturally in food. Enzymes such as trypsin and chymotrypsin are animal/pancreatic enzymes and should be avoided. Pancreatic enzymes do not survive the digestive processes and are not active in all the pH ranges found in the digestive tract, so they are not as effective as plant enzymes.
- **Plant Enzymes.** Plant-based enzymes are more effective than animal or pancreatic enzymes for a couple reasons. First, plant enzymes have a broader pH activity range, which means they can help digest foods and remain active throughout the intestinal tract. Second, they do not interfere with the natural functioning of the body and therefore have no side effects. Look for formulas that list enzymes such as protease, lipase, amylase and peptidase.

## PROBIOTICS

Probiotic supplements should include several different types of bacteria (at least eight different strains), and should list each of the individual microflora found in the supplement by their Latin name with a count of how many of these live cultures are found in each capsule or serving. The count should read as million CFU or billion CFU. (i.e. Lactobacillus acidophilus 1 billion CFU, Lactobacillus bulgaricus 200 million CFU). The probiotic supplement should also include a whole food FOS (fructooligosaccharide) such as Jerusalem Artichoke, onion, or banana to “feed” the bacteria. Look for these ingredients on the label. It is also important to find probiotics in a capsule rather than a tablet. The manufacturing processes required to make a tablet use high heat and/or high pressure and a variety of binding agents which destroy the bacteria.

