

## BACKGROUND INFORMATION

We are all familiar with the phrase, “Out of the mouths of babes,” but we should be equally aware of what goes into those youthful mouths. Modern day lifestyles and eating habits are contributing to a startling decline in the quality of nutrition our children absorb. A growing number of children are faced with health issues as a result of questionable nutrition from fast food dining and unsupervised snacking. Issues ranging from an alarming increase in childhood obesity, diabetes, behavioral problems, immune system anomalies to gastrointestinal health problems have stemmed from this lifestyle. These issues, if not addressed, can lead to health problems for your child that will follow them throughout their lives.

National Enzyme Company has developed a digestive enzyme product especially for children; a great tasting, vegetarian, chewable tablet called BioCore<sup>®</sup> Kids. It was developed after scientific research produced conclusively the digestive benefits of microbial enzymes. The ingredients used in the formulation include various protease enzymes to digest proteins, carbohydrases for carbohydrates, and lipases for fats. The computer controlled model of the human digestive system, unique to the research organization TNO of the Netherlands, measured the ability of these enzymes to successfully assist in the digestive process in both the acid environment of the stomach as well as the slightly alkaline small intestine. The study showed that supplementing with digestive enzymes can substantially increase the digestion of proteins and carbohydrates. The formulation used in BioCore<sup>®</sup> Kids is based upon this study and is specially designed for their diet.

To combat dairy intolerance, BioCore<sup>®</sup> Kids also contains lactase enzymes to assist in digestion of lactose found in dairy products. It has been estimated as many as 75% of African-Americans and Native Americans, as well as 90% of Asian-Americans are lactose intolerant. As many as 50 million Americans are considered to be lactose intolerant. These numbers include Kids which can be especially alarming since their growing bodies need calcium. The main source of calcium for most children is milk and yogurt. Low levels of the enzyme lactase, which digests the milk sugar known as lactose, may result in symptoms including gas, bloating, cramping and diarrhea. Many children regularly suffer from these gastrointestinal symptoms. Supplementing BioCore<sup>®</sup> Kids to the diet can help alleviate these symptoms when lactose containing dairy products are consumed.

Refer to Table 1 for the various enzyme activities used in BioCore<sup>®</sup> Kids.

When it comes to dining out you may notice that the majority of children’s menu item are fried and many contain cheese. They may be more appealing to the taste buds but they can cause many digestive

Supplement Facts		
Serving size: 1 chewable tablet		
Amount per serving		% DV
Total Carbohydrates	less than 1 gram	<2*
BioCore Kids <sup>®</sup>	72 mg	
Amylase (from <i>Aspergillus oryzae</i> )	1,750 DU	†
Protease (from <i>A. oryzae</i> )	10,500 HUT	†
Protease (from <i>A. oryzae</i> )	2,000 PC	†
Lactase (from <i>A. oryzae</i> )	500 ALU	†
Glucosylase (from <i>Aspergillus niger</i> )	2.5 AGU	†
Protease (from <i>A. niger</i> )	25 SAPU	†
Invertase (from <i>Saccharomyces cerevisiae</i> )	200 SU	†
Lipase (from <i>Candida rugosa</i> , <i>A. niger</i> , and <i>Rhizopus oryzae</i> )	250 FIP	†
Malt diastase (from barley)	750 DP <sup>®</sup>	†
Protease (from <i>A. oryzae</i> )	1 AP	†

\* Based on a 2000 calorie diet  
† Daily value not established

Other ingredients: Fructose, maltodextrin, natural colors and flavors (strawberry flavor, citric acid, beet pwd ext, raspberry flavor), magnesium stearate

Table 1

problems and may contribute greatly to the obesity issues facing a growing number of our children. With the busy lifestyles of today, little time is available for proper exercise and nutritional sit-down home cooked meals. Parents want to be sure their children are getting all the nutrients they require for proper growth and development but circumstances make this an increasingly difficult task.

One way to ensure maximum nutritional value for your children is to provide them with supplemental vitamins and digestive enzymes. Many parents are providing the vitamin supplements but most are unaware of the benefits of supplemental enzymes.

One tablet with each meal will increase the bioaccessibility of the nutrients in the food consumed, insuring maximum nutritional benefit. Better digestion leads to better assimilation of nutrients and helps avoid dietary deficiencies of proteins, carbohydrates, fats, and their metabolites.

*The information contained in this paper is intended for educational purposes only. It is neither to be used to market or advertise a product nor to make labeling claims. The FDA and FTC have strict regulations concerning how information can be used in promoting a dietary supplement, and it is recommended that adherence to these regulations be followed.*

*The use of digestive enzymes may elicit an allergic response in certain individuals. In rare cases some people might develop a rash or experience nausea, difficulty in breathing or swelling/itching in the ears or throat. Discontinue use if any of these symptoms occur. If symptoms worsen or breathing becomes impaired, seek immediate medical attention.*