

# SUPERIOR NUTRIENT AND MEDICATION ABSORPTION SETS THICK-IT<sup>®</sup> CLEAR ADVANTAGE<sup>™</sup> APART.

WHITE PAPER | JUNE 2016

# THE ISSUE OF ABSORPTION

While xanthan gum-based thickening powders offer many proven advantages over starch-based powders, shortcomings remain in other xanthan-based agents currently marketed for use with dysphagia patients.

Many dysphagia patients require multiple medications and supplements for better nutrition and health. Many medications and nutritionally necessary minerals are positively charged. Xanthan powder naturally carries a negative charge, causing it to bind to positively charged materials.

While all agents bind to some degree, xanthan is a soluble fiber and passes through the body undigested. Any material that binds to the xanthan in the digestion process may be excreted without being absorbed into the bloodstream. For patients who take medications orally with a xanthan-thickened beverage or who must thicken nutritional supplements such as Ensure® or Boost®, some or all of the medication and nutrients may not be bioavailable to the patient. Several studies have shown lower than expected blood serum concentrations of nutrients and medications when administered with xanthan-thickened beverages.

Ensure® is a registered trademark of Abbott. Boost® is a registered trademark of Nestlé.

The product of two years of study and research, Thick-It® Clear Advantage™ is the newest dysphagia nutrition innovation from the trusted minds at Kent Precision Foods Group, Inc. (“KPFG”), makers of Thick-It®.

## SENIORS TAKE A VARIETY OF MEDICATIONS



**95%** TAKE 1+ MEDICATIONS DAILY



**46%** OF LTC RESIDENTS TAKE MORE THAN 9 MEDICATIONS

(Physician Intervention for Medication Reduction in a Nursing Home, JAMDA 2011)

# THE ADVANTAGE IS CLEAR

Dedicated to innovation in dysphagia nutrition, KPKG's Thick-It® team has researched a solution for this serious problem by developing a proprietary xanthan powder formulation that supports the absorption of nutrients.

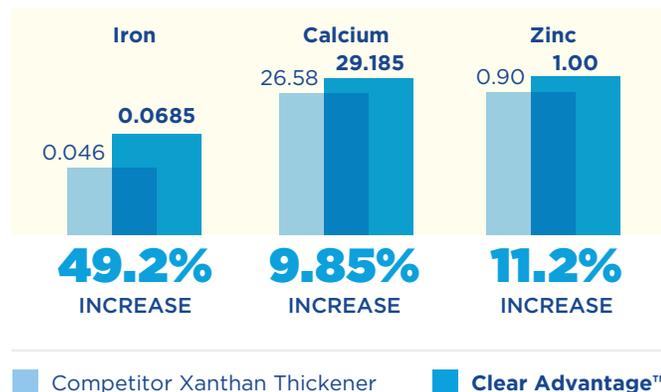
By using ascorbic acid (vitamin C) to acidify the xanthan, Thick-It® Clear Advantage™ reduces the likelihood that positively-charged medications and nutrients will bind to it.

These results were verified by extensive research. First, in vitro studies proved the hypothesis that ascorbic acid inhibits the bonding of xanthan powder with positive ions. Then, in vivo studies were performed at the University of Wisconsin–Stout. To test the hypothesis via blind trials, piglets were fed xanthan-thickened breast milk or formula. Researchers tested the blood to determine the levels of nutrients absorbed. Compared to plain xanthan, the acidified Clear Advantage™ formula delivered the most favorable results of several agents being studied, specifically when measuring levels of iron, calcium, and zinc.

Clearly, bioavailability of medications and nutritional supplements is a critical concern in providing nutrition and treatment for patients with dysphagia. Tested and proven, Thick-It® Clear Advantage™ is a xanthan-based thickener that can be used with medications and nutritional supplements to increase the absorption of active ingredients.

Medications and nutrients can dissolve and be absorbed by patients more easily with Thick-It® Clear Advantage™ than with other xanthan-based thickening powders.

Blood Serum Mineral Levels (mg/L)



Average of Observed Data  
US Patent 9,101,156 B2, August 11, 2015

# GLOSSARY OF TERMS

## **DYSPHAGIA**

Difficulty or discomfort in swallowing, as a symptom of a disease.

## **IN VITRO**

Outside the body. Made to occur in a laboratory vessel or other controlled experimental environment, rather than within a living organism.

## **IN VIVO**

Inside the body. Made to occur within the living. Studies that are tested on whole, living organisms.

## **XANTHAN GUM**

A polysaccharide secreted by the bacterium *Xanthomonas campestris*, used as a food additive and rheology modifier. It is composed of pentasaccharide repeat units comprising glucose, mannose and glucuronic acid.

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**XANTHAN VS STARCH:  
THE ADVANTAGES ARE  
MORE THAN CLEAR.**

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