

# KAPCé™ 35 Feed

MICROENCAPSULATED "C" VITAMIN 35%

ND Pharma & Biotech

GLOBAL COMPANY · GLOBAL SOLUTIONS

[www.ndpharmabiotech.com](http://www.ndpharmabiotech.com)

Bilingual Edition (Spanish\_English)

# KAPCé™ 35Feed

## MICROENCAPSULATED “C” VITAMIN 35%

### OUR MICROENCAPSULATION ADVANTAGE:

1. Stable Core material.
  2. Controlling release time.
  3. Separation of reactive and/or incompatible ingredients in a multicomponent formulation.
  4. Protecting sensitive food components, to ensure against nutritional loss, oxidation, water filtration, ambient degradation reactions, etc.
  5. Encapsulation also increases stability of vitamin supplements, for example, which are normally sensitive to UV radiation, light, oxygen, metals, humidity and temperature.
  6. Microencapsulation in the pharmaceutical industry is used to protect the lining of the mouth and esophagus from harsh, orally administered drugs which are released in the stomach by the action of stomach acids and enzymes on the microcapsule coating.
  7. Homogeneous matrix of the encased core material is formed into a desired shape and dried.
- Encapsulation greatly enhances the stability of food materials, particularly through high temperature/short time processing. KAPCé™ display enhanced shelf life and enhanced retention of potency, as well as inhibition of reaction with other ingredients.
  - Acidulants, for example, are used as flavor modifiers, preservation aids and processing aids. Unencapsulated, these materials can react with food ingredients to decrease shelf life, degrade color and flavor, and cause separation of ingredients. Encapsulation precludes or limits oxidation and provides controlled release, thereby minimizing or overcoming many of these problems. Additionally, encapsulation reduces hygroscopicity, reduces dusting and improves flowability.
  - Products, ingredients, additives, processing aids, etc., which are typically added to fortify a variety of foods, including breakfast foods, dairy products, infant formulas and pet foods, may be encapsulated to reduce off- flavors, to permit timed-release and to reduce susceptibility to extremes in temperature and moisture and reactions with other ingredients.
  - KAPCé™ is the one of the cutting-edge technology Micro-encapsulated formulas from ND Pharma & Biotech Co.

Encapsulation Matrix

Active ingredients



# MICROENCAPSULATION

ND Pharma & Biotech

# KAPCé™ 35Feed

## MICROENCAPSULATED "C" VITAMIN 35%

La Vitamina C pura es inestable en naturaleza y por tanto, cuando se somete a cualquier tipo de procesado destinado a su uso como materia prima alimentaria o alimento ésta tiende a perder su estabilidad de una forma ciertamente rápida, especialmente en contacto con el aire, calor, humedad y otras variables atmosféricas.

La vitamina C es un nutriente necesario en alimentación y nutrición animal, ya que muchas especies, carecen de la capacidad de sintetizar este nutriente vital, esencialmente en acuicultura. Existen casos en los que la Vitamina C está incluida como ingrediente en la dieta y en su caso en formulaciones y pre-mezclas proporcionadas por algunos proveedores. Al mismo tiempo, la Vitamina C es altamente requerida por diferentes sectores de la industria con la finalidad de paliar las pérdidas que se producen como consecuencia del proceso de lixiviación de este nutriente en el agua. De este modo, hemos desarrollado una variedad de formas estabilizadas químicamente y físicamente de la vitamina C para contrarrestar estas pérdidas y se utilizan ampliamente en la industria.

La forma preferida de vitamina C a elegir en cada caso, dependerá de las condiciones de procesado de los alimentos y materias primas utilizadas y especialmente de la especie a la que vayan destinados. Para la mayor parte de las dietas preparadas en frío o a temperatura ambiente, el micro-encapsulado de la Vitamina C, estabilizada físicamente utilizando la tecnología de micro-encapsulación de alta calidad, es la primera elección de productores y nutriólogos.

Las enzimas presentes en una matriz alimentaria puede escindir los grupos fosfato de los productos estabilizados químicamente y por lo tanto provocando la reducción de su estabilidad general. Por ello, KAPCé se elabora mediante un sistema y tecnología combinados para garantizar la estabilidad físico-química de la Vitamina C, sin rival tecnológico en el mercado actual, proporcionando mayores beneficios en ciertas especies, esencialmente crustáceos y mariscos de tracto intestinal corto, alcanzando grados de estabilidad difíciles de obtener por otros procedimientos, cuyo resultado es la escisión parcial o incompleta de los ésteres de fosfato de la molécula de Vitamina C, que causan una alteración de la biodisponibilidad, expresada en términos de reducción.

KAPCé TM es una presentación de estabilidad mejorada de Vitamina C que no se altera con el contacto ambiental, no se oxida y no se filtra en el agua, resistiendo los rigores derivados de mezclas y procesos varios y su contacto con piensos de diferente naturaleza matricial. Es la solución ideal para enriquecimiento y fortificación con éste tipo de nutriente.

KAPCé TM posee su principal aplicación en Piscicultura y Acuicultura. Sin embargo es ampliamente utilizado en la cria de Aves y Porcino, por sus múltiples y contrastados beneficios y ventajas.

Encapsulation Matrix  
Active ingredients



# MICROENCAPSULATION

ND Pharma & Biotech

# KAPCé™ 35Feed

## MICROENCAPSULATED “C” VITAMIN 35%

Pure Vitamin C is unstable in nature and thus far, when subjected to any type of processing intended for use as food raw material or food it tends to a rapid lose its stability, especially in contact with air, heat , humidity and other atmospheric variables.

Vitamin C is a necessary nutrient in feed and animal nutrition, as many species lack the ability to synthesize this vital nutrient essentially in aquaculture. There are cases that Vitamin C is included as an ingredient in diet and possibly in pre-mixtures and formulations provided by some vendors. At the same time, Vitamin C is highly required by different sectors of industry in order to mitigate the losses occurring as a result of the leaching process of this nutrient in the water known as “water flow-ability and filtration”. Aside, we have developed a variety of shapes and physically chemically stabilized vitamin C to offset these losses and are widely used in industry.

The preferred form of vitamin C to choose from in each case will depend on the processing conditions of food and raw materials used and especially the species to which they are intended. For most cold-prepared diets or those made at room temperature, micro-encapsulated Vitamin C, physically stabilized using technology micro-encapsulation of high quality, it is the first choice of producers and nutritionists.

Enzymes present in certain food matrixes can cleave the phosphate groups of products chemically stabilized and therefore causing the reduction of its overall stability. Therefore, KAPCé is produced by a combined system and technology to ensure physical and chemical stability of Vitamin C, without technological rival in the market today, providing greater benefits in certain species, mainly crustaceans and shellfish of short intestinal tract, reaching degrees of stability difficult to obtain by other processes, resulting in the partial or incomplete cleavage of the phosphate esters of Vitamin C molecule, causing an alteration in bioavailability, expressed in terms of reduction.

KAPCé TM is a presentation of improved-stability “C” Vitamin that is not affected by environmental contact, will not rust and does not leach into the water, resisting the rigors derived from mixtures and various processes and contact with feed of different matrix nature. It is the ideal solution for enrichment and fortification when this type of nutrient is required to use.

KAPCé TM has its main application in Fisheries and Aquaculture . However it is widely used in poultry and pigs, due to its multiple and verifiable benefits and advantages.

Encapsulation Matrix  
Active ingredients



# MICROENCAPSULATION

ND Pharma & Biotech

# KAPCé™ 35Feed

## MICROENCAPSULATED "C" VITAMIN<sub>35%</sub>



**ND Pharma & Biotech**

GLOBAL COMPANY · GLOBAL SOLUTIONS  
[www.ndpharmabiotech.com](http://www.ndpharmabiotech.com)

**Contact Us:**  
General Regional Areas

**Europe, Middle East & Africa**  
[ndpharmabiotech@europe.com](mailto:ndpharmabiotech@europe.com)

**North America**  
[ndpharmabiotech@usa.com](mailto:ndpharmabiotech@usa.com)

**Latin American Countries**  
[ndpharmabiotech@samerica.com](mailto:ndpharmabiotech@samerica.com)

**Asia-Pacific**  
[ndpharmabiotech@asia.com](mailto:ndpharmabiotech@asia.com)

For more information, please contact: [info@ndpharmabiotech.com](mailto:info@ndpharmabiotech.com)  
Reference: KAPCé™