

BASIC INFORMATION ON ACETIUM

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FUNCTIONALITY AND EFFECTS OF THE ACETIUM™ CAPSULE

Acetium™ is a CE marked product developed and patented by Biohit Oyj. It is intended for persons with a low-acid or anacidic stomach.

Acetium capsules include 100mg of natural amino acid as an active ingredient. L-cysteine reacts with acetaldehyde, forming harmless 2-methylthiazolidine-4-carboxylic acid (MTCA) and thus reducing the amount of acetaldehyde in the stomach.

Acetium capsules include matrix granules in which the L-cysteine is bound with a matrix former (Eudragit® RS) and an inactive excipient. This causes L-cysteine to be released at a sustained rate and locally in the stomach - exactly where acetaldehyde is formed.

The effective operation of cysteine

After its release from the granules, L-cysteine dissolves quickly in the stomach and reacts with acetaldehyde.

Based on permeability studies on the Caco-2 cell line, it has been proven that L-cysteine does not absorb in the stomach to any significant extent, since the stomach mucosa does not include the LAT2 amino acid transporter responsible for the absorption of cysteine in the small intestine. Thus, L-cysteine released from the Acetium capsules exits the stomach only by binding with acetaldehyde or advancing to the small intestine along with food.

Clinical studies have proven that when administered on an empty stomach with ethanol solution, Acetium capsules containing 200mg of L-cysteine can bind acetaldehyde for at least 45 minutes. At the end of the test, all test persons still had measurable concentrations of L-cysteine in the stomach. In actual usage, food in the stomach slows down L-cysteine's transfer to the small intestine. Therefore Acetium capsules are effective for even longer.

The MTCA formed from acetaldehyde and L-cysteine is excreted in the urine and feces.

Cysteine is a natural amino acid

L-cysteine is a natural amino acid, 1-2g of which is digested daily along with proteins in regular food.

Furthermore, it is a generally used food additive (E920) and has been approved by the European Food Safety Authority (EFSA) as a food additive suitable for both adults and children. (http://www.efsa.europa.eu/EFSA/efsa_locale-1178620753812_1178620766019.htm). Additionally, the US Food and Drug Administration (FDA) has certified L-cysteine as safe and granted it a GRAS classification (Generally Regarded as Safe).

Further information:

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