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Fast C
Review & Summary of Clinical Trials of Proprietary Product

Fast C, a proprietary Vitamin C product which incorporates an alkalizing preparation (insert patent #) was evaluated in 3 well controlled blinded clinical studies to determine the rate and extent of absorption of ascorbic acid. The Fast C composition is formulated to control the pH of the stomach contents, facilitating the rapid and complete absorption of ascorbic acid while protecting the delicate stomach tissues from potential adverse effects of Vitamin C.

The studies were conducted using approved protocols in well controlled clinical trials in a recognized clinical research center, in conformity with FDA Good Clinical Practices guidelines and with independent IRB approval.

Studies were conducted in healthy human volunteers (non-smoking males). Subjects were dosed with the test products (Fast C or Ester C), following a seven-day low Vitamin C diet washout period, in a blinded, randomized crossover design. All subjects received both products. Plasma samples were drawn at 0, 30, 60, 90, 120, 210 and 240 minutes post administration of the test Vitamin C product and analyzed for ascorbic acid concentration. Urine collections were also obtained post dose up to and including 24 hour post dose, and analyzed to provide a cumulative 24 hours urinary excretion of ascorbic acid and its principal urinary metabolite, di hydroxyl ascorbate (DHA)

The pharmacokinetic evaluation of the rate of absorption of Vitamin C from each product was evaluated using the time to peak plasma level (T_{max}), the peak plasma concentration (C_{max}) and area under the plasma curve from 0 to 4 hour post dosing (AUC_{0-4}). The extent of absorption (completeness of absorption) was addressed with the cumulative 24 hour amount excreted in the urine.

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Conclusions from the 3 studies can be easily drawn by evaluations of the plasma curves which clearly indicate that the Fast C product released ascorbic acid for absorption from the GI tract very quickly after dosing, with significant plasma levels obtained at 30 minutes post dose as compared to Ester C. The Fast C formulations consistently appear to produce higher (C_{max}) and earlier peak plasma levels (T_{max}), compared to the Ester C control product. The Fast C area under the 0-4 hr. plasma curve (AUC_{0-4}) also strongly suggests that more vitamin C has been absorbed and available to the body in the first 4 hours after administration of Fast C, due to a much quicker onset and rate of absorption. The 24 hour urinary excretion data indicate that all the tested Vitamin C products yielded similar total amounts of ascorbic acid absorbed.

The alkalizing ascorbic acid product, Fast C, demonstrated a rapid ***in vivo*** release and absorption of ascorbic acid compared to Ester C. Both products resulted in apparently complete absorption of the Vitamin C dose. Fast C results in faster absorption, making the active Vitamin C available to body tissues quicker after ingestion.