



## Oral Absorption Study of Vitamin C Supplements in Guinea Pigs – A Preliminary Report –

### PURPOSE

To determine the plasma total ascorbate levels in guinea pigs after oral gavage with Ascorbic Acid (AA), Another Vitamin C (AVC) or The Right C® (TRC), at a dose of 8 mgs/kg body weight as equivalent ascorbate activity (human dose equivalent of 560 mgs.).

### PROCEDURES

Thirty albino guinea pigs housed for seven days on a 12 hour light/dark cycle and fed Purina Rabbit Chow diet. This depleted body ascorbic acid prior to administering the test material. The guinea pigs were then randomly assigned to 3 test groups (9 per group) and a control or plasma basal ascorbate group (3). The test materials were then administered at equal ascorbate activity by gavage. The basal group received vehicle only (distilled water). Blood samples were obtained at 0 minutes (basal group) and the test material groups at 30, 60 and 90 minutes.

Blood was collected into tubes containing EDTA and centrifuged at 2000 rpm for 3 minutes. The plasma was then transferred to a second tube and frozen prior to analysis.

HPLC was used to analyze the plasma samples for total ascorbate activity. Standards (ascorbic acid, Sigma) were run during analysis to check the calibration of the instrument. The recovery of ascorbate from the plasma was 99.2% and the relative standard deviation was 4.3%.

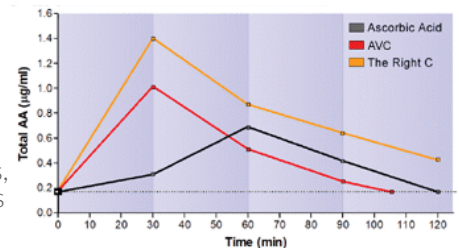
### RESULTS

The mean Total Ascorbate plasma concentrations in micrograms AA/mL are given in table 1 below.

Test Material	0 min	30 min	60 min	90 min
Ascorbic Acid	—	0.31	0.64	0.46
AVC	—	1.02	0.49	0.25
The Right C®	—	1.40	0.87	0.64
Control	0.17			

The data are graphically presented in Figure 1.

Figure 1.



THE C GROUP, INC.

### DISCUSSION OF RESULTS

The data shows, at equal ascorbate activity administered as AA, AVC or TRC, that TRC attained the highest plasma AA level at 30 minutes post-dose. Compared to AVC, TRC attained 41% higher plasma levels at 30 minutes. TRC plasma levels were 414% higher than AA at 30 minutes, while AVC was only 260% higher. At 60 minutes, TRC was 71%, and at 90 minutes, 160% higher, than the corresponding plasma levels attained with AVC. At 60 and 90 minutes, the plasma ascorbate concentrations from AVC fell below both TRC and AA.

The fourth point on each respective curve represents the result of regression analysis. Plasma levels of AVC return to baseline (control) levels at approximately 105 minutes post-dose. Extrapolation predicts that AA plasma levels return to baseline at 120 minutes, and TRC at approximately 180 minutes post-dose.

The AUC (area under the curve) for TRC is in the range of 175% greater than AVC, and 200% greater than AA plasma levels. The AUC is a measure of Total Ascorbate activity delivered and thereby absorbed over the test period.

### CONCLUSIONS

At equal ascorbate activity doses, The Right C® attains higher ascorbate plasma levels than AVC or AA. These higher levels are maintained for the entire test period. The Right C® delivers 175% more ascorbate activity than delivered by an equal ascorbate activity dose of AVC. The maintenance of plasma levels by TRC is due to a more rapid and sustained oral uptake than AVC or AA. This is based on the fact that the downslopes of the plasma levels maintain the same rate until return to baseline.



Stomach Friendly



Backed by Research



Doctor Recommended



Naturally Increases Cellular Energy



EnterCell/MultiPath Technology



Sugar Free