

Glycemic Index Score of the USANA TenX Antioxidant Blast Dietary Supplement

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Glycemic index (GI) was developed to rank different foods according to the extent to which they increase blood glucose following ingestion.¹ Foods with high GI scores contain rapidly digested carbohydrates and produce large rises and falls in blood glucose. Foods with low GI scores contain slowly digested carbohydrates and produce gradual and relatively low rises in blood glucose.

GI scores are currently used in scientific research to examine the role of glycemic impact in defining risk of certain diseases. For example, a growing body of research has shown that long-term consumption of a high-glycemic-impact diet increases the risk of developing diabetes, heart disease, and colon cancer.^{2,3} GI scores are also useful in designing weight- and eating-management programs.^{2,4,5,6}

The objective of this study was to determine a GI score for USANA's TenX Antioxidant Blast dietary supplement.

Methods

This study was conducted using internationally recognized GI methodology.⁹

Eleven healthy subjects were recruited, and each completed four test sessions: two involving the reference food (glucose solution), and two involving the test food (USANA TenX Antioxidant Blast). At each session, subjects reported to USANA's research center in the morning in a fasting state (10–12 hours overnight). Fasting blood glucose was measured using a

One Touch Ultra® Blood Glucose Meter (Johnson and Johnson) on blood obtained from a finger puncture. Subjects then consumed a fixed amount of test or reference food. In each case, the test and reference foods supplied 25 grams of available (digestible) carbohydrate. Specific nutritional characteristics for the servings of reference and test food are given in Table 1.

After consumption of the test or reference food, subjects were

Table 1
Characteristics of the Test Foods

	Energy (kJ)	Protein (g)	Fat (g)	Carb. (g)
Glucose Reference	400	0.0	0.0	25.0
USANA TenX Antioxidant Blast	519	0.0	0.4	28.5

required to remain seated and refrain from additional eating and drinking for the next two hours. Additional blood samples were taken at 15, 30, 45, 60, 90, and 120 minutes after the initial meal.

Results were used to plot two-hour blood glucose response curves, and the area under the curve (AUC) for each plot was calculated. (AUCs indicate the magnitude of total blood glucose response.) A GI score for the test food was calculated by dividing two-hour blood glucose AUC values by the subjects' average two-hour blood glucose AUC value for the reference food (glucose solution), then multiplying by 100 to obtain a percentage score.

Results

Figure 1 plots time course data for average two-hour blood glucose response curves following consumption of the reference and test food. AUC analysis based on the above response curves yielded a Glycemic Index score of 31 for the USANA TenX Antioxidant Blast dietary supplement.

Discussion

The Glycemic Index scale is continuous from 0–100%. In general, a food is considered high-glycemic if its GI score is greater than 70, moderately glycemic if its GI score is between 56 and 69, and low-glycemic if its GI score is less than 55.⁷ Results from this study show that USANA's TenX Antioxidant Blast dietary supplement, with a GI score of 31, is a low-glycemic food.

Acknowledgments

This study was conducted at USANA Health Sciences, Inc. Participants were normally healthy volunteers. All were employees of USANA.

References

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Figure 1
Two-hour blood glucose response curves for USANA's TenX Antioxidant Blast dietary supplement and a glucose reference meal. Values are averages for eleven (11) subjects.

