



ANDERSON
ADVANCED INGREDIENTS

EnergySMART® Glucose Assist Study
Arizona State University

GRAPE Study 1: *Glycemic Responses of Amylopectin containing drinks*

- ★ **Objective:** To quantify the glycemic index of **EnergySMART® Soluble** and a multi-ingredient Glucose-support formula featuring **EnergySMART® Soluble** as compared to a glucose drink. We hypothesized that both the **EnergySMART® Soluble** supplement and the Glucose-support formula featuring **EnergySMART® Soluble** will have low glycemic index.

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- ★ **Design: Subjects:** 9 non-diabetic ($\text{HbA1c} < 6.5$) males aged 30-55 years with body mass indices ranging from 27.5 to 35 $\text{kg}\cdot\text{m}^{-2}$. Individuals with impaired glucose tolerance will be included as long as they are not diagnosed with diabetes and their HbA1c is less than 6.5.
- ★ **Preliminary Testing:** Medical history, weight, height, body composition via dual x-ray absorptiometry (DXA) and glycosylated hemoglobin (HbA1c) measurement.

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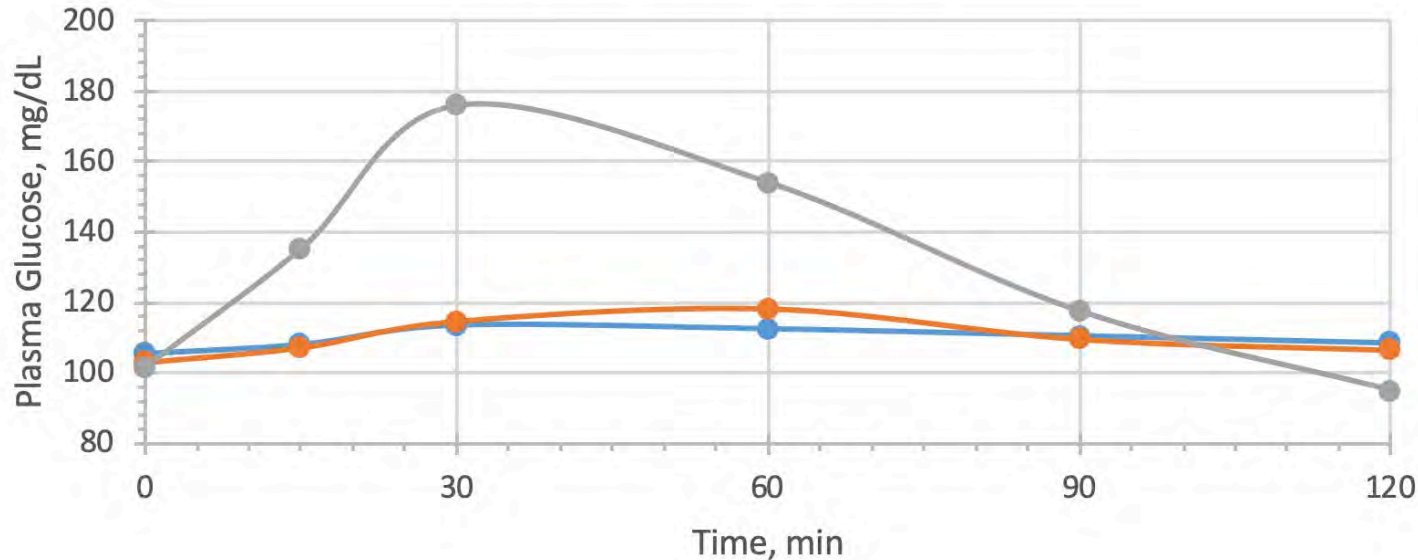
- ★ **Protocol:** After a 10-hour overnight fast, subjects will complete three (3) experimental visits in which they will ingest one of three beverages in a randomized order. During experimental visits subjects will either be given the following three (3) experimental drinks:
- ★ Glucose-support formula featuring **EnergySMART® Soluble** (200 kcal)
- ★ **EnergySMART® Soluble** (50 g, 200 kcal)
- ★ Liquid dextrose solution in the form of TRUTOL ® Glucose Tolerance Test Beverage (50 g, 200 kcal)

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- ★ **Blood Sampling:** Venous blood will be drawn from the antecubital vein before ingestion of treatment beverage (baseline; 0 min) with subsequent sampling at 15, 30, 60, 90, and 120 minutes after ingestion.
- ★ **Primary Outcome Variables:** Blood concentrations of glucose, insulin, and area under the curve during the 120-min.
- ★ **Secondary Outcome Variables:** hemoglobin, hematocrit, total plasma proteins, plasma osmolality, glucagon, leptin, adiponectin, Glucagon-like peptide-1, and C-peptide.

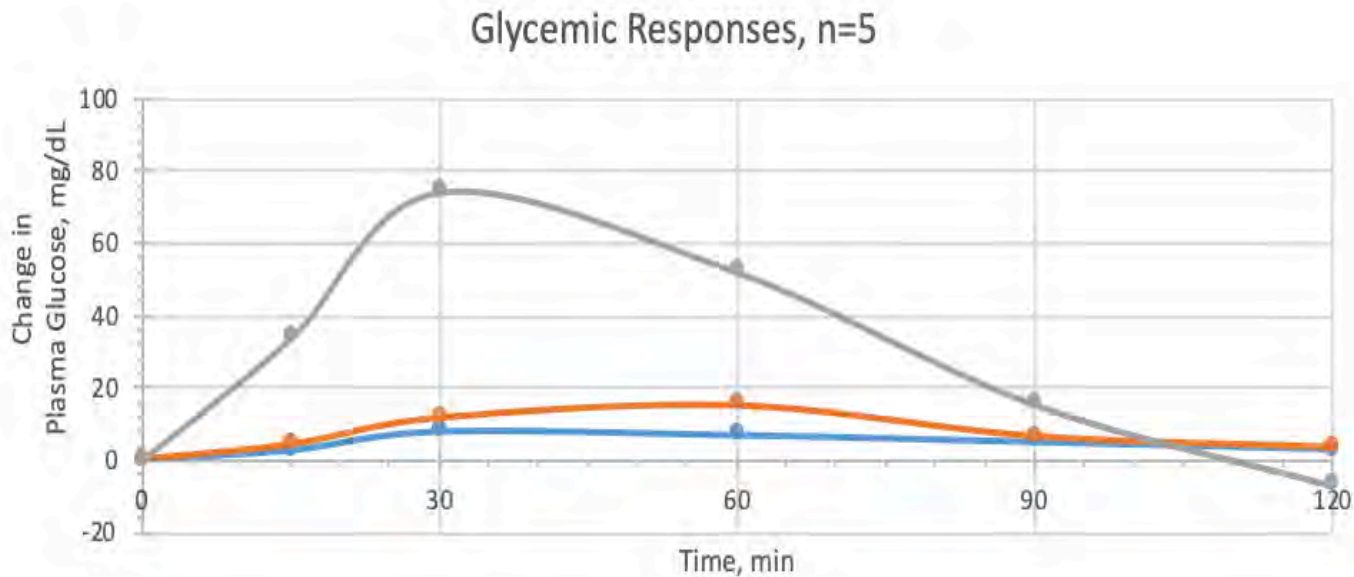
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Glycemic Responses, n=5



- ★ Glucose-support formula featuring **EnergySMART® Soluble**
- ★ **EnergySMART® Soluble**
- ★ Liquid dextrose solution

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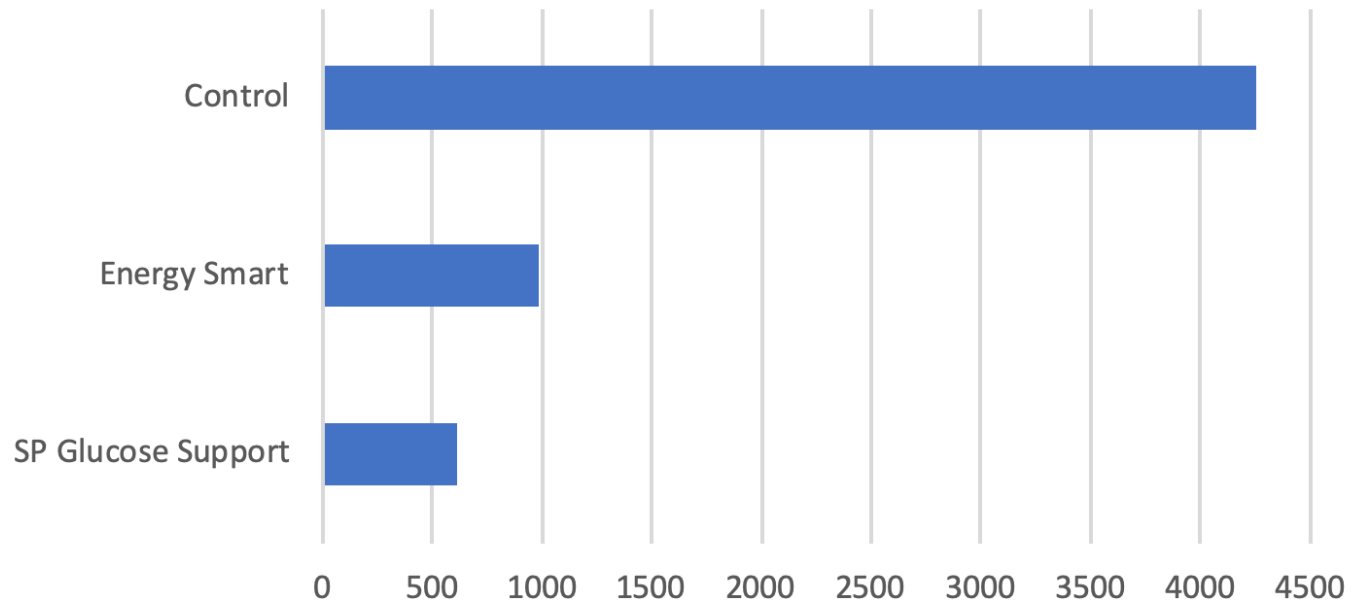


- ★ Glucose-support formula featuring **EnergySMART® Soluble**
- ★ **EnergySMART® Soluble**
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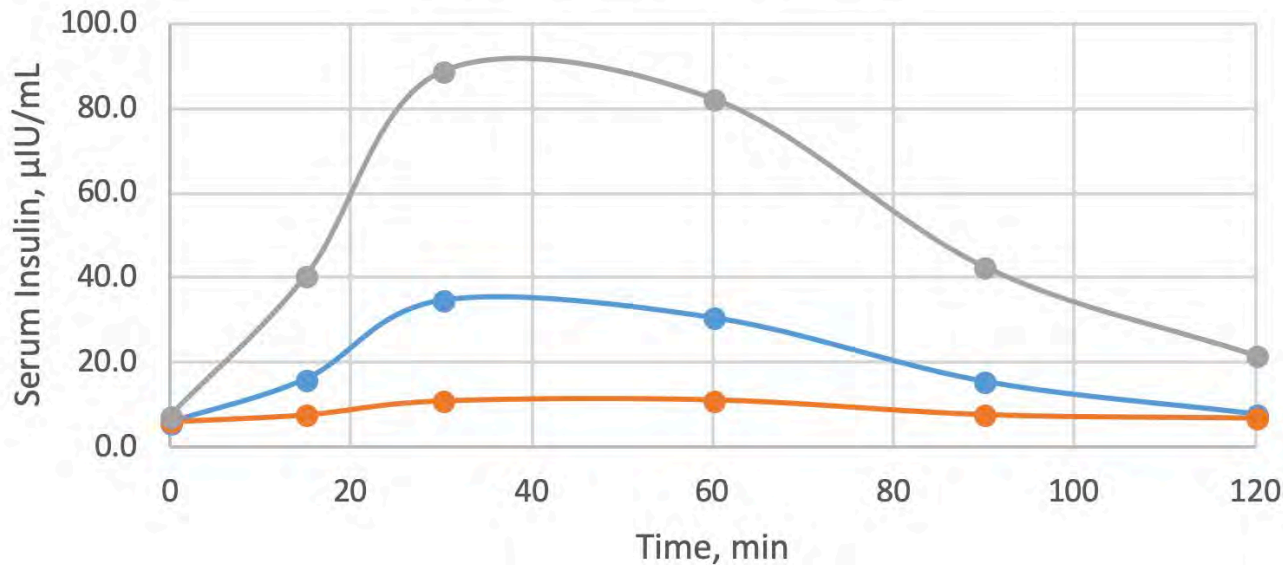
★ GLUCOSE AREA UNDER THE CURVE (AUC)

Glucose inAUC,
mg ▪ min/dL



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Insulin Responses, n=5



- ★ Glucose-support formula featuring **EnergySMART® Soluble**
- ★ **EnergySMART® Soluble**
- ★ Liquid dextrose solution



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