

**iff**

# UNLOCKING NEW POSSIBILITIES IN PLANT-BASED FORMULATIONS

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# AGENDA



**Introduction IFF Food Ingredients**



**Understanding the plant-based market and its impact on food culture**



**Tackling challenges & opportunities**



**Wrap Up**

# IFF FOOD INGREDIENTS

Powered by DANISCO® and SOLAE®



**EXTENSIVE PORTFOLIO**

- Tailor-made stabilizer systems
- Hydrocolloids
- Proteins
- Emulsifiers
- Antioxidants
- Fibers
- Fermentates



**INGREDIENT KNOW-HOW**

- Composition
- Nutritional Profile
- Ingredient Interaction & Synergies
- Process Parameters



**PROCESS KNOW-HOW**

- Specialists Across Ingredients
- Mimic Industrial processes
- Strong cross-regional co-operation between our centers worldwide



**SUPPORT**

- State-of-the-art Pilot Plant Facilities
- Prototypes & Demo Samples
- In-Plant Support
- Analysis
- Sensory
- Training



**CREATIVITY**

- Concept Development
- Market Insights
- Workshops
- Cross-application Knowledge & Co-operation



# WHAT'S HOLDING BACK PLANT-BASED GROWTH IN EUROPE



**Taste & Texture  
Fall Short  
Of  
Traditional  
European  
Standards**



**Perceived  
“Ultra-processed”  
And  
Ingredient  
Concerns**



**Premium  
Pricing  
Without  
Clear Value  
Justification**



**Cultural  
Attachment  
To Meat**



**Health  
Sustaina-  
bility  
Animal  
welfare**



**Overhype  
And Unmet  
Expectations**

# WHAT DOES IT TAKE TO CHANGE A FOOD CULTURE?





# BLENDING PROTEINS THE RIGHT BABY STEPS?

## WHY BLENDING MEAT?

- Upgrade animal-based products with plant ingredients for **better nutrition and sustainability**
- Fit existing **consumer habits and processing lines**

## INGREDIENT OPPORTUNITIES

- Optimize ingredients for **binding, texture, yield, and fat stabilization**
- Deliver **measurable ESG and nutrition gains at 20–50% meat replacement**
- **Cost-efficient toolbox** offsets raw material volatility






## STRATEGIC POSITION

- **Formulation-led upgrades**
- Act as **solution partners** with application know-how

# HOW WE COOK IT?

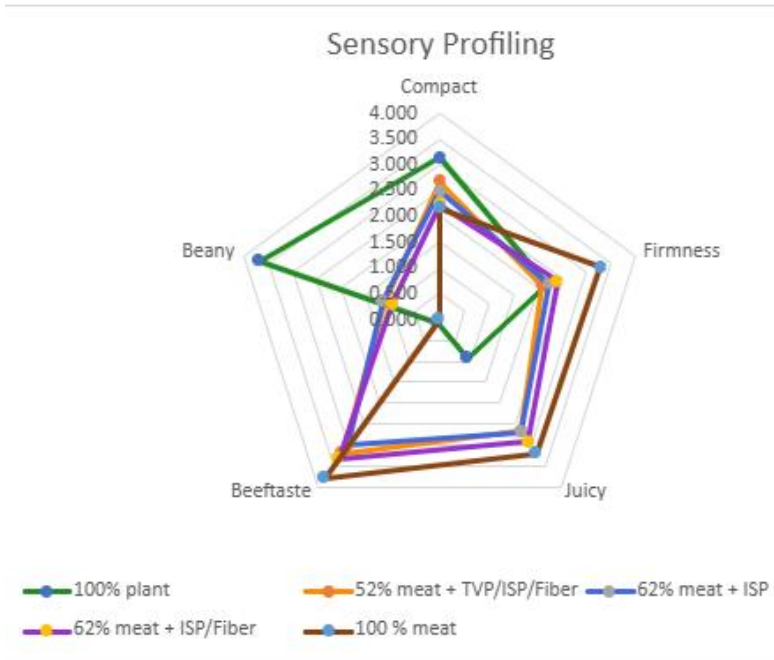
# BLENDING PROTEIN FORMULATIONS

## IFF BURGER TESTS

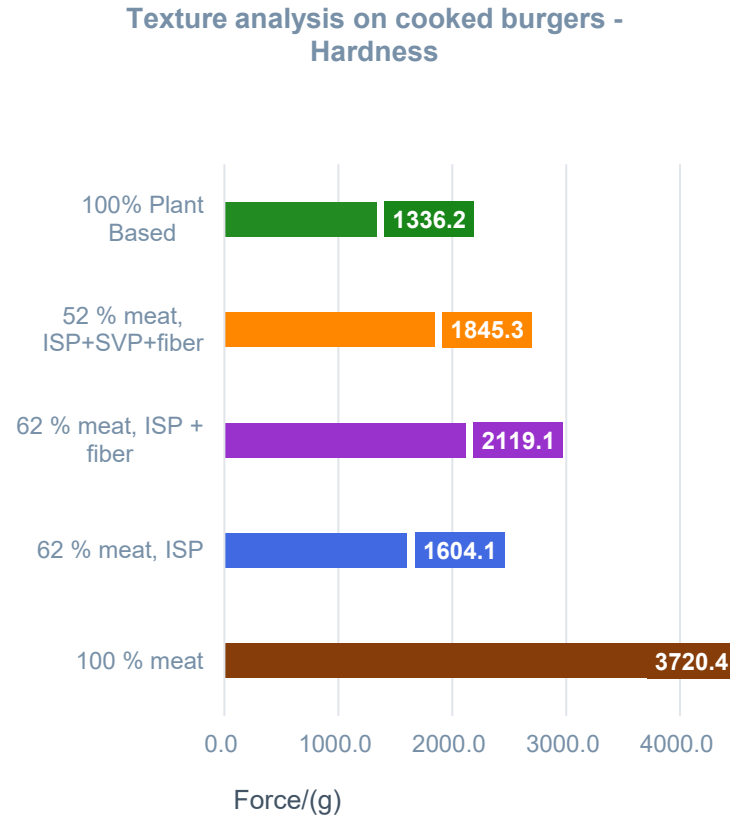
	100% Meat	Blended 62% Meat 9% Soy isolate	Blended 62% Meat 9% Soy isolate, 8% Fiber	Blended 52% Meat 6% Soy isolate, 6% SVP, 8% Fiber	100% Plant Based 7% Soy isolate, 16% SVP, 4% Fiber
<b>Nutri-score</b>					
<b>Claims EU</b>	High Protein	High Protein	High Protein High Fiber	High Protein High Fiber	High Protein Source of Fiber
<b>Cost Reduction</b>	0	28%	24%	29%	55%
<b>CO<sub>2</sub> per kg product</b>	13.9	9.0	9.1	7.8	1.0

# OPTIMIZING TEXTURE, TASTE & YIELD

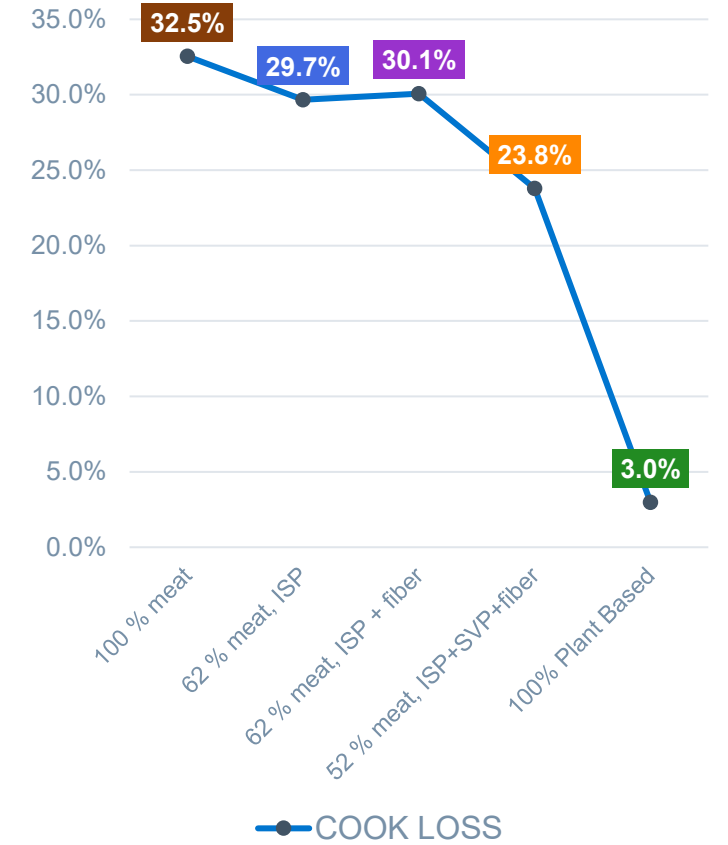
## Sensory Analysis



## Texture Analysis



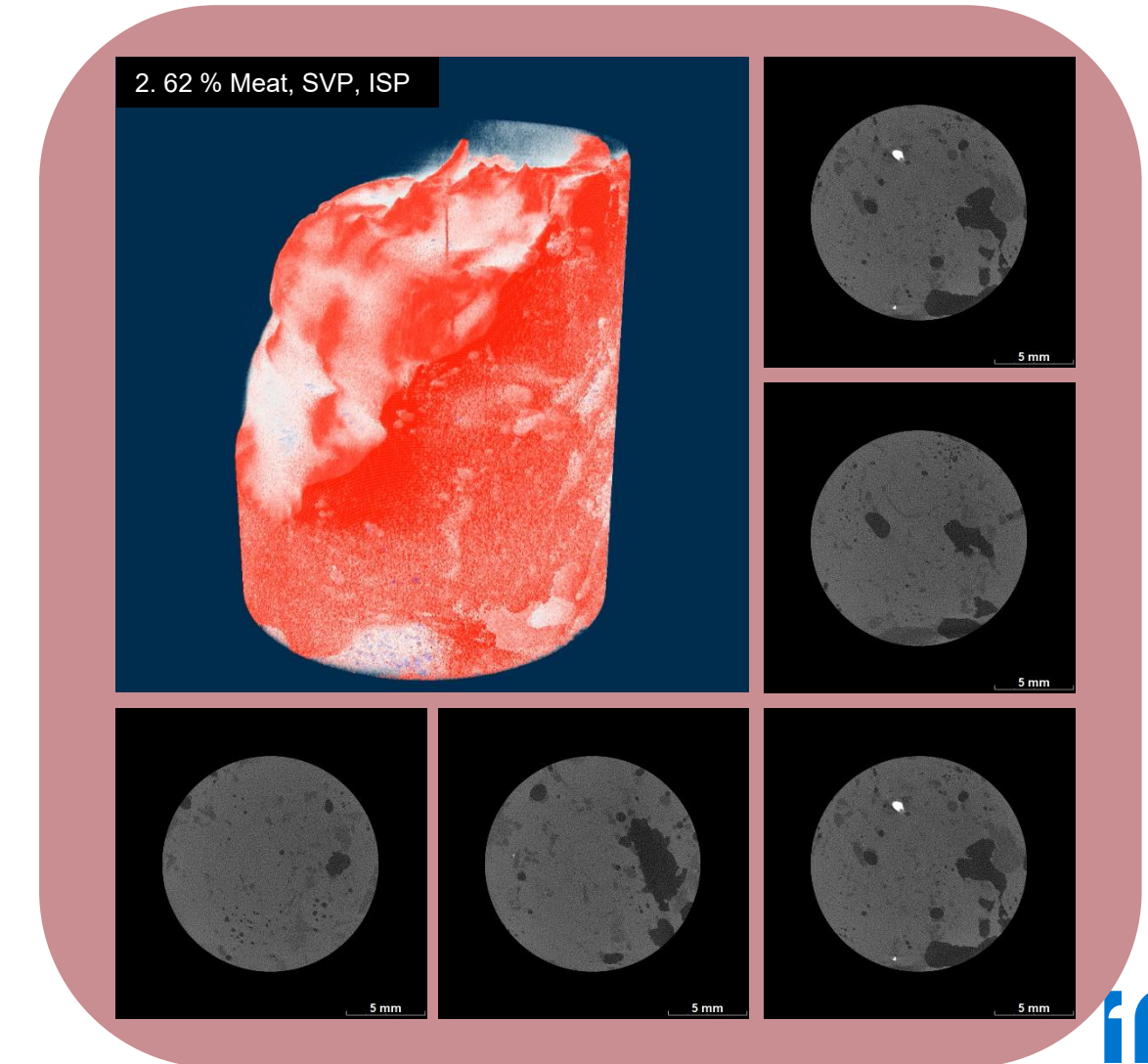
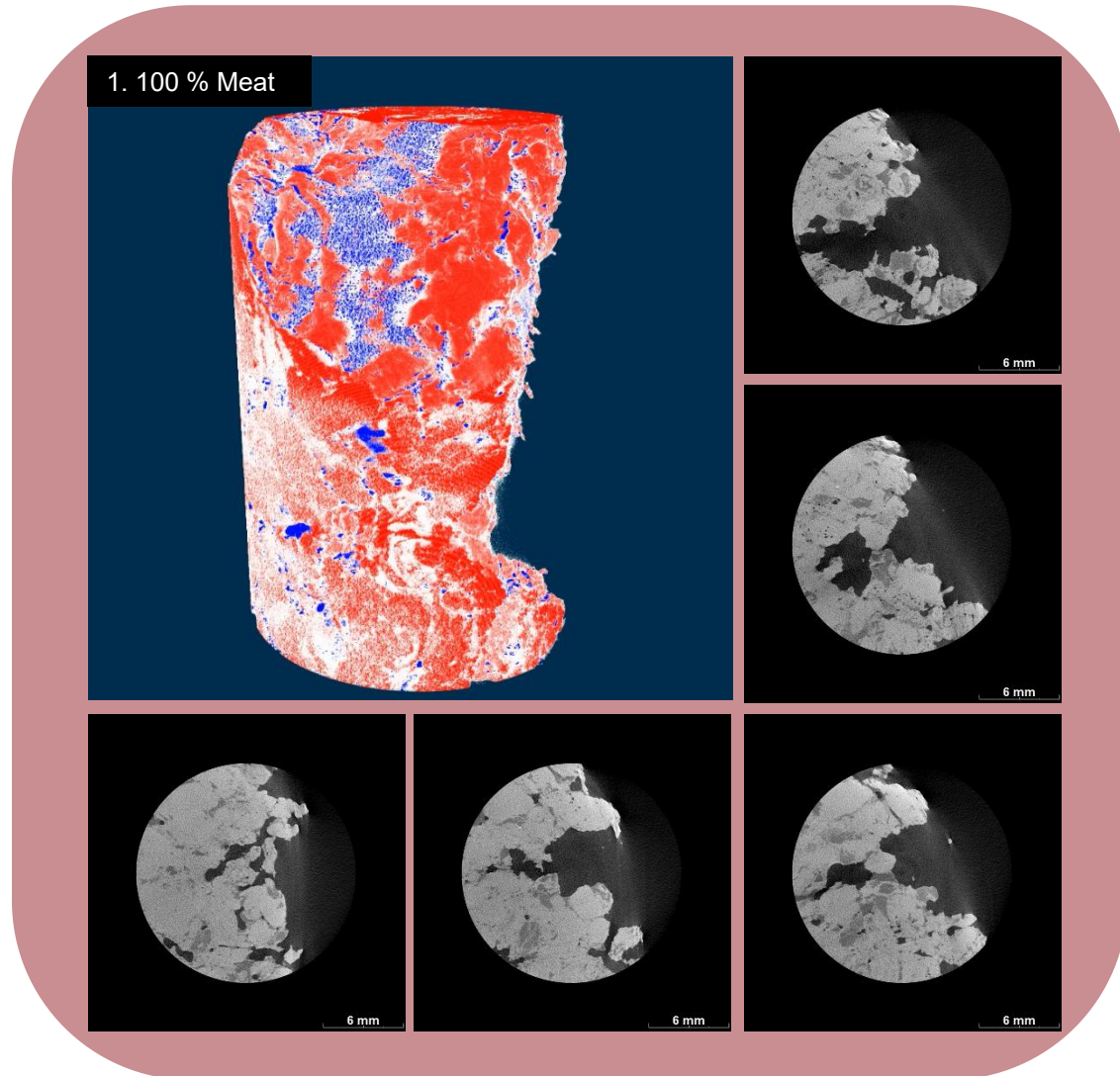
## Cook Loss



# X-RAY TOMOGRAPHY

○ Fat   ● Protein   ● Air pockets

Cooked



# CHICKEN HYBRID LOLLIPOP

## Meat | Smart Protein Innovation

~ 11.2% cost saving vs meat control

**Breaded Chicken Lollipops** – Invented with **SOLAE® SUPRO® TEX 7200** Innovation.

Crispy, juicy, and indulgent, these breaded chicken lollipops delight consumers while enabling smarter formulation. The combination of **SOLAE® SUPRO® 548 IP and SOLAE® SUPRO® TEX 7200 IP** supports partial meat replacement without sensory compromise -delivering great taste, reliable texture, and meaningful cost optimization.

### Why?

- Customizable meat replacement levels.
- Kid-friendly appeal
- Versatile applications: nugget, lollipop, or schnitzel

### What?

- **SOLAE® SUPRO® TEX 7200 IP** (structured vegetable protein)
- **SOLAE® SUPRO® 548 IP** (soy protein isolate)
- **IFF Natural flavor chicken**
- **DANISCO® GUARDIAN® VIVOX 4-737** (antioxidant - meat mass)
- **DANISCO® GUARDIAN® SYNEROX HT-144** (antioxidant - frying oil)

Powered by **DANISCO®** and **SOLAE®**



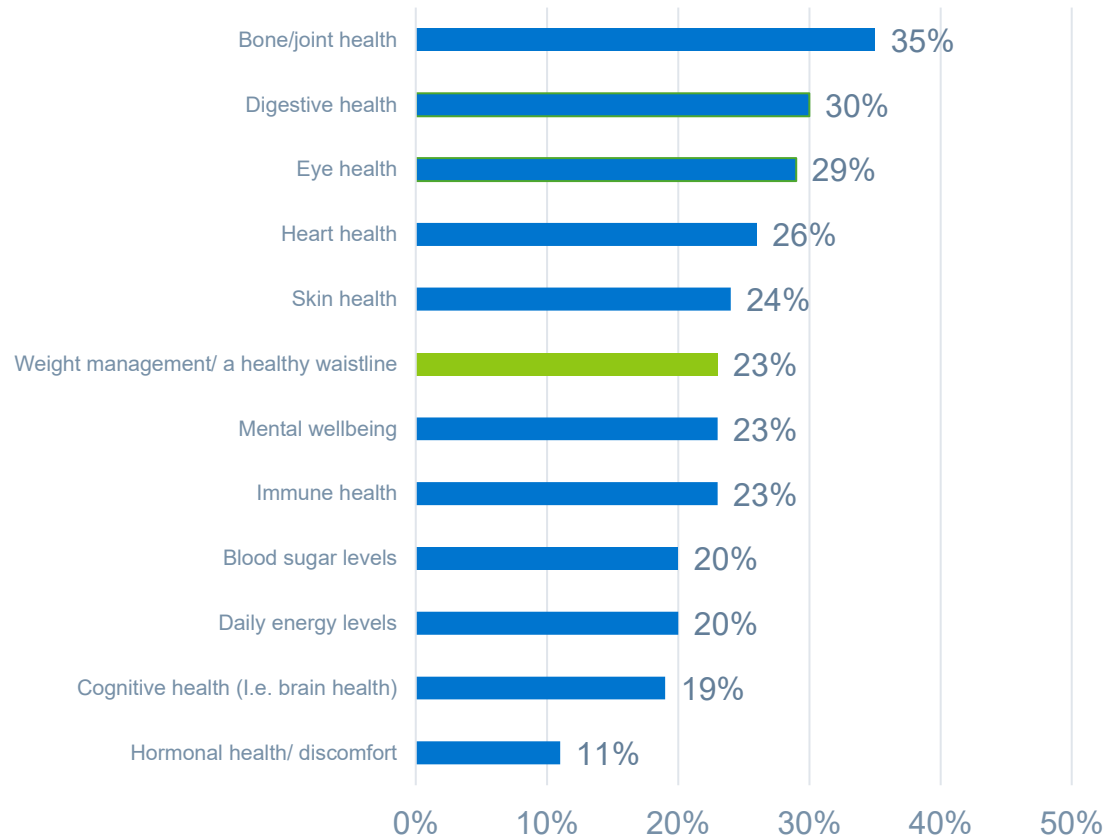


# **BRINGING BACK THE JOY**

**Helping GLP-1 Consumers to enjoy  
Eating & Drinking Again**

# Globally 23% of consumers are concerned about their waistline

Are you concerned about any of the following areas of health?



**7%**  
of consumers globally with a weight focus went for GLP-1-based drugs to manage weight concerns\*

FMCG Gurus 2025 : Average 20 countries Geographies: Argentina, Australia, Brazil, Canada, China, Denmark, France, Germany, Indonesia, Italy, Japan, Malaysia, Mexico, Poland, South Africa, South Korea, Spain, Thailand, UK, USA.

\*Innova Health & Nutrition Survey (Average of 11 countries).

Public

# F&B PREFERENCES & CONSUMPTION HABITS ARE REDEFINED WITH GLP-1

- The rise of GLP-1 medications is transforming more than individual health - it's **reshaping how people interact with food**.
- From **appetite suppression** and **digestive** side effects to **shifts in taste and texture preferences**, these changes are redefining what it means to nourish and satisfy.
- Unlike traditional weight-loss consumers who are focused on restriction, GLP-1 consumers are navigating **medically driven changes in biology**.
- Appetite is suppressed not by choice or willpower, but by medication. Hunger cues are dulled. The foods they once loved may now be **unappealing—or even intolerable**.

**➔ What does this mean?**



# ALTERED GLP-1 CONSUMER PREFERENCES RAISES THE DEMAND FOR NEW F&B FORMULATION



## SENSORIAL PERCEPTION

### Taste perception alterations, eg:

- Sweetness perception overwhelming
- Bitterness sensitivity increasing
- Fatty foods rejected due to altered mouthfeel
- Saltiness perception heightened

### Texture perception alterations, eg:

- Dry or sticky foods avoided
- Dense or chewy items can feel overwhelming
- Creamy, smooth textures preferred



## NUTRITION & HYDRATION

### Due to suppressed appetite, GLP-1 users struggle to get adequate nutrition, eg:

- Protein
- Fiber
- Vitamins & Minerals

### Need for aid in hydrating, as sense of thirst diminishes:

- Electrolytes
- Betaine



## ADDRESSING SIDE-EFFECTS

### Digestive discomfort:

Probiotics, Fiber

### Loss of lean muscle mass:

Protein

### Nausea:

Herbal teas, peppermint, ginger etc

### Skin health & hair loss:

Collagen, Aloe vera



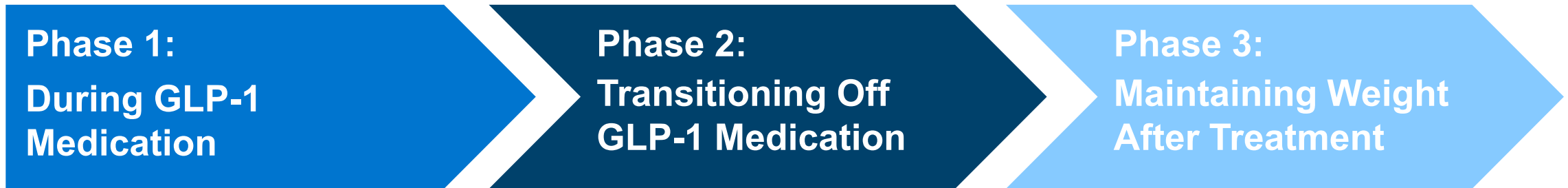
## FORMAT

### Reduced appetite calls for:

- Smaller portion size
- Convenient on-the-go food as meal-times are less desirable
- Quality nutrition (e.g., high protein) in a smaller package while preserving great taste



# CHANGING NEEDS AND BEHAVIORS ACROSS THE WEIGHT LOSS JOURNEY



GLP-1 drugs typically **suppress appetite**, slow gastric emptying, and **alter taste & texture perception** bringing a need for **high density food and hydration**.

As **appetite and digestive function begin to normalize**, hunger starts to come back, and the goal is to **maintain healthy eating habit**.

**Appetite suppression disappears**, bringing the need for food & beverages that support **satiety and nutrition**.

**INITIALLY, THE APPETITE IS  
REDUCED SO MUCH GLP-1 USERS  
MUST REMIND THEMSELVES TO EAT**





# GLP-1 IMPACT: LACK OF SUFFICIENT FIBER INTAKE

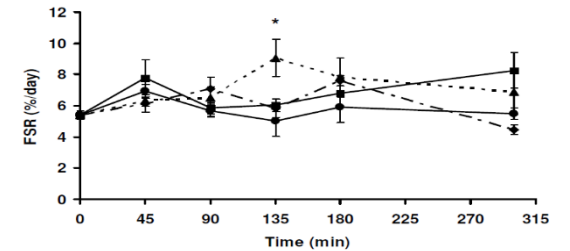
GLP-1 users often **cut out carbohydrate-rich foods** like pasta and bread due to intolerance, which inadvertently **reduces fiber intake.**<sup>1</sup>

A clinical study by GNC found that GLP-1 users, **do not meet daily fiber needs**, as they consume **too few fruits, vegetables, whole grains, and legumes.**<sup>2</sup>

# INVESTIGATING SOY-DAIRY PROTEIN BLEND FOR ENHANCED MUSCLE BUILDING

Blending soy, whey and casein proteins increases the anabolic window for increased growth and maximize muscle building

Pre-Clinical study to identify the 'best blend'

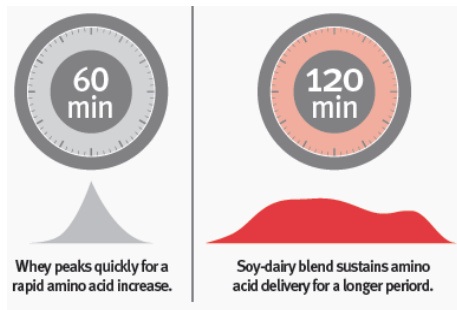


Soy-dairy protein blend (25% whey, 25% SOLAE<sup>®</sup> SUPRO<sup>®</sup> Soy Protein Isolate, 50% casein)

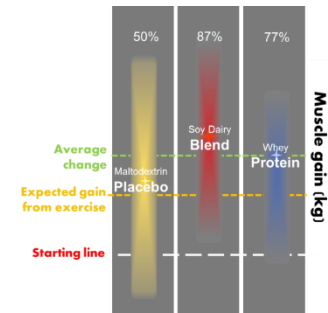
Acute clinical study in young adults

Extended clinical study in young adults

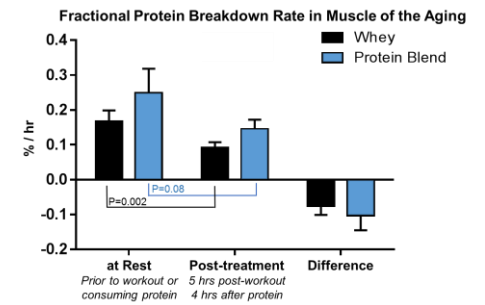
Acute clinical study in older adults



Reidy, et al. J Nutr. 2013  
Reidy et al. J Appl Physiol. 2014

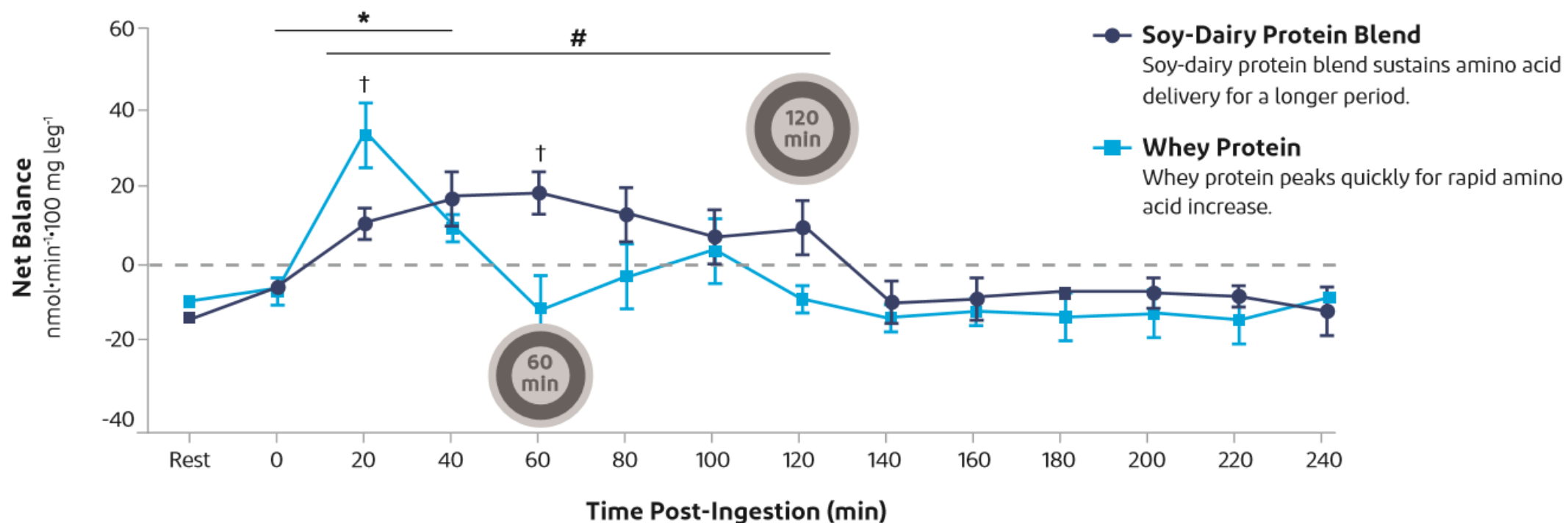


Reidy, et al. J Nutr. 2016



Borack, et al. J Nutr. 2016

# SOY-DAIRY BLEND VS. WHEY PROTEIN ALONE PROVIDES A PROLONGED DELIVERY OF AMINO ACIDS TO THE MUSCLES



† Net balance significantly more positive at 1 & 2 hrs post-ingestion compared to whey.

**Blend: Supports positive net balance at 20, 40, 60, 80, 100 and 120 mins.**

**Whey: Net balance was positive at 20 and 40 minutes, post-ingestion. Net balance is negative within an hour.**



# MUSCLE BUILDER PRO

*Prolonged protein for stronger results*

**A great-tasting, ready-to-drink high-protein beverage concept designed for active consumers seeking effective and balanced muscle support as part of their daily lifestyle.**

Muscle Builder Pro is built on a **carefully selected soy-dairy protein blend**, delivering **27 g of high-quality protein per serving**. By combining proteins with different digestion profiles, MUSCLE BUILDER PRO supports a **more sustained availability of amino acids** compared to single-source proteins, aligning with current scientific understanding of muscle protein nutrition.

Formulated with **SOLAE® SUPRO® Soy Protein** and **DANISCO® VEGEDAN™ BEV 1040** from the IFF portfolio, the concept brings together **nutrition science, formulation expertise and enjoyable sensory performance** in a scalable RTD solution.

\*Reidy et. al. (2013). Protein Blend Ingestion Following Resistance Exercise Promotes Human Muscle Protein Synthesis. Journal of Nutrition. Volume 143, Issue 4, April 2013, Page 410-416.  
<https://tinyurl.com/2bcr8h5y>



# MUSCLE BUILDER PRO

## IFF PRODUCT DESIGN™

**SOLAE® SUPRO® XT55 IP Soy Protein Isolate** is ideally suited for use in a wide variety of beverages and powders with high dispersibility and solubility, low viscosity, and excellent flavor.

**DANISCO® LITESSE® Two Polydextrose** is an easy-to-use soluble fiber with excellent stability and no impact on the taste

**DANISCO® VEGEDAN™ BEV 1040** it is a stabilizer and emulsifier blend special made developed to ensure superior particle suspension and fat stabilization in high protein drinks. Hereby give a superior stability over shelf life in high protein drinks.

**Natural Flavorings: IFF FLAVORFIT™** masking solutions and flavors  
Raspberry flavor

### Ingredient list:

Water, milk protein concentrate, sugar, polydextrose (dietary fiber) **soy protein isolate**, whey protein concentrate, sunflower oil, potassium citrate, stabilizer (cellulose gel, cellulose gum, calcium chloride), salt, emulsifier (E471), flavorings.

Contains: Soy, milk

## NUTRITIONAL PROFILE

	100 ml	300 ml Serving size
Energy (kcal)	78	235
Protein (g)	9,3	27,9
Carbohydrates( g)	6,1	18,4
of which sugars	5,5	16,5
Fat ( g)	1,3	3,9
of which saturated fat	0,1	0,3
Fiber g	3,04	9,1
Sodium (g)	0,04	0,12

### EU NUTRITION CLAIMS (EC/1924/2006):

- High protein, High fiber, Low saturated fat

### EU HEALTH CLAIMS No 432/2012):

- Protein contributes to a growth in muscle mass
- Protein contributes to the maintenance of muscle mass
- Protein contributes to the maintenance of normal bones

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## KEY TAKEAWAY

Hybrid products could be a pragmatic response to some of the challenges that have been seen in plant-based products.

Instead of replacing animal products, they build on it - keeping animal products as the sensory anchor, while plant ingredients improve functionality, nutrition, and sustainability.

# COME VISIT US

