SolvPro®

SolvPro® – Optimized Plant Protein Blends Overview

Product	Ingredients	Protein Level	PDCAAS (Dehydrated)	PDCAAS (Hydrated)	Allergen	Description
SolvPro® 024	Pea Protein Isolate, Brown Rice Protein Concentrate	80	0.91	1.00	None	Allergen-free combination of a functional grade of pea protein isolate and brown rice proteins, specifically designed for extruded snack type systems and bakery and grain products. The granulation and functionality works very well in extruded crisps, snacks and pasta. Also available in organic format (see SolvPro 044 below).
SolvPro® 028	Pea Protein Isolate, Brown Rice Protein Concentrate	80	0.91	1.00	None	Allergen-free combination of a soluble grade of pea protein isolate and finer mesh brown rice protein, specifically designed for beverage and systems requiring higher solubility characteristics. Available in organic format too (see SolvPro 044 below).
SolvPro® 030	Pea Protein Isolate, Mung Bean Protein, Brown Rice Protein Concentrate	80	0.92	1.00	None	Allergen-free combination of North American-produced pea protein isolate,and Asian-sourced mung bean protein and brown rice proteins. This is a broad-based functionality system, but specific grades and mesh sizes of the three proteins can be sourced for specific end-use applications.
SolvPro® 032	Fava Bean Protein Isolate, Brown Rice Protein Concentrate	85	0.88	1.00	None	Allergen-free combination of a functional grade of fava bean protein isolate and brown rice proteins, specifically designed for extruded snack type systems and bakery and grain products. The granulation and functionality works very well in extruded crisps, snacks and pasta. This product has a different flavor profile and slightly improved emulsification, gelling, and water binding functionality versus the pea-based system (024 and 028). Available in organic format too.
SolvPro® Organic 044	Organic Pea Protein Isolate, Organic Brown Rice Protein	80	0.91	1.00	None	Allergen-free combination of North American grown and produced organic pea protein isolate and Asian-sourced organic brown rice protein. This system was designed for baking and grain applications where solubility and mesh profile is not as important of an attribute.
SolvPro® 301	Pea Protein Isolate, Canola Protein Isolate	90	1.00	1.00	None	Blend of highly functional and clean flavored pea protein and canola protein isolates with >90% protein. Provides excellent emulsification and water binding properties with good solubility and mouthfeel with very neutral flavor.
SolvPro® 302	Fava Bean Protein Isolate, Canola Protein Isolate	90	1.00	1.00	None	Blend of highly functional and clean flavored fava bean protein and canola protein isolates with >90% protein. Provides excellent emulsification and water binding properties with good solubility and mouthfeel with very neutral flavor. Slightly thicker with enhanced mouthfeel versus the 301 pea-based system.
SolvPro® 303	Fava Bean Protein Isolate, Canola Protein Isolate, Pea Protein Isolate, Sunflower Protein Isolate	90	1.00	1.00	None	Blend of highly functional and clean flavored fava bean protein, pea protein, sunflower and canola protein isolates with >90% protein. Provides excellent emulsification and water binding properties with good solubility and mouthfeel with very neutral flavor. Very thin and drinkable viscosity.
SolvPro® 304	Pea Protein Isolate, Fava Bean Protein Isolate, Canola Protein Isolate	90	1.00	1.00	None	Blend of highly functional and clean flavored fava bean protein, pea protein, and canola protein isolates with >90% protein. Provides excellent emulsification and water binding properties with good solubility and mouthfeel with very neutral flavor. Slightly thicker with enahnced mouthfeel versus the 303 system with sunflower protein added.
SolvPro® 305	Fava Bean Protein Isolate, Pea Protein Isolate, Sunflower Protein Isolate	90	0.88	0.95	None	Blend of highly functional and clean flavored fava bean protein, pea protein, and sunflower protein isolates with >90% protein. Provides excellent emulsification and water binding properties with good solubility and mouthfeel. Designed specifically to "extend" whey protein isolates with a complementary amino acid profile; maintains a PDCAAS of 1.0 up to a 50:50 blend with considerable cost savings.

* PDCAAS values are specific to the reference standard fo 2-5 year olds that the FDA mandates through the CFR, this MUST be used for any food product making any qualified protein claim.

NOTE: All of the above systems are available in an optimized flavor-masked version for flavor sensitive applications or where the finished process allows for this (ie RTM drinks).

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Plant Proteins - Functionality Overview Summary

The functionality and nutritional properties of various plant proteins vary widely, as well as the pricing for each type. The chart below summarizes these properties across some select plant proteins:

Attribute/Protein	Pea Protein Isolate	Fava Bean Protein Isolate	Mung Bean Concentrate	Canola Protein Isolate	Sunflower Protein Isolate	Brown Rice Protein Concentrate	Soy Protein Concentrate
Solubility	+	+	+	++	+/-	- to +/-	+
Emulsification	+	+	+	++	+	-	++
Gelling	_	_	+	++	-	-	+
Water-Binding	+	+	++	+/-	++	+	+
Texture / Mouthfeel	++	+	+	++	+/-	-	++
Foaming	+/-	+/-	+	+	+/-	-	+
Flavor Neutrality	++	++	++	+	++	-	+
Allergen- Friendly	++	++	++	+	++	++	-
PDCAAS	0.75	0.59	0.55	1.00	0.48	0.50	0.90
Limiting AA	MET	MET	MET	None	LYS	LYS	MET
Cost	$	$	$	$$	$$	$	$

Color Coding
++ = Strong
+ = Moderate
+/- = Limited / Variable
- = Poor

The SolvPro® technology and modeling allows for customized blends that optimize both nutritional and functional properties, specific to each end-use application and customer requirements.

Please let us know your specific needs and we can either suggest an existing system or develop one to meet your exact requirements.

The information herein is, to the best of our knowledge correct. The data outlined and statements made are intended only as a source of information. No warranties, expressed or implied are made. On the basis of this information, it is suggested that you evaluate the products on a laboratory scale prior to uses in a finished product. The information contained herein should not be construed as permission for violation of patent rights.

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