



Instantised & Microfiltered Whey Protein Isolate

Very Low Lactose
Athletes and Active Lifestyles
Additional Free Form Aminos
Enhanced Filtration Process (EFP)

WPIs – The Purest Form of Whey Protein available

Whey Protein Isolates (WPI) offer an excellent combination of protein quality, an abundance of branched chain amino acids (BCAAs) and very low levels of fat and lactose. They are therefore ideal for anyone on a *High Protein* and *Low Carb* Diet. Musashi WPI contains less carbohydrates and lactose and is easier to mix than other commercially available WPIs. It is produced by cold microfiltration, which makes it a superior product to the Ion Exchange varieties. Our WPI is also processed through our Enhanced Filtration Process (EFP) in our Musashi's GMP manufacturing facility

EFP – A Musashi Innovation

Musashi Protein Powder formulations are all filtered using cutting edge technology. These filtration processes produce final protein compositions which retain optimum protein purity & quality. The filtered proteins are then enhanced by the addition of Essential AAs and BCAAs. By adding free form amino acids, the amount of available protein nutrients for recovery is increased, as is the speed of nutrient delivery to the bloodstream.

The Taste Test

Due to the *High Protein Low Carb* nature of WPIs, getting the taste right is always a challenge. The importance of taste, texture and mouth feel is a major priority in this product. The inclusion of latest flavours and natural emulsifiers has produced a great tasting, creamy product with no bitter aftertaste commonly associated with protein shakes!

Lactose Sensitivity and Poor Digestion

The low lactose content of WPI is an important consideration for athletes who have insufficient lactase and / or cannot tolerate lactose.

Superior Absorbability

One of Whey Protein Isolate's significant advantages over other protein extracts is its absorbability. Musashi WPI, being composed mainly of very short chain proteins - di and tri peptides as well as amino acids - does not require much in the way of digestion, so enzyme efficiency is increased. This means that the protein is on its way to your muscle tissue much faster.

BCAAs

Whey proteins contain the highest concentration of BCAAs available from any food source. BCAAs are unique because they can be utilised very quickly at the muscle site to repair the breakdown that naturally occurs during lengthy periods of exercise. Musashi WPI is bolstered with addition of extra free form BCAAs.

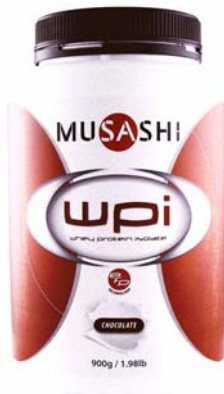
Glutamine

Whey Protein Isolate is high in glutamine and unique *glutamylcysteine groups* that are considered to be key factors in the glutathione-promoting activity of the protein mixture. The glutathione (GSH) antioxidant system is the principal protective mechanism of the cell and is a crucial factor in the development of the immune response and exercise recovery.

Glycomacropptides

Glycomacropptides are unique peptides that are associated with improved gut and immune function. They have an immunoprotective effect because of complex sugar groups called sialic acids attached to the whey protein molecules. These sialic acid groups can act as binding sites for toxins and viruses, reducing the extent to which they bind to other cells such as those in the digestive tract.

Glycomacropptides may also help calcium absorption and promotion of growth of beneficial Bifido bacteria in the intestine. They also reduce the adhesion of



bacterial strains, such as the Streptococcus species, that cause tooth decay to dental surfaces.

Glycomacropetides improve digestion by stimulating the release of cholecystokinin (CCK) which influences bowel mobility, gastric emptying, pancreatic and gallbladder function.

Why Take a Protein Powder

The World Health Organisation suggests that we consume 0.8g of protein per kg daily as a minimum for health, however those active in sports and more serious exercise programs can need anywhere from 1.2 to 2.0 g per kg everyday. It can be difficult to obtain these levels from your diet alone.

EAA's

Adequate essential amino acids, which form structural proteins, are vital for virtually everything from healthy muscles, ligaments, tendons, organs, glands, nails, hair and most body fluids. Besides water, protein comprises the largest portion of our body weight, and

as such, the body's requirement for protein is directly related to good health.

Tipton (1999) found that ingestion of oral essential amino acids resulted in a change from net muscle protein degradation to net muscle protein synthesis after heavy resistance exercise in humans.

Free form essential amino acids are added to Musashi WPI because of their high bioavailability. Bioavailability gauges the extent to which an administered substance reaches its site of action or utilization in the body. This addition increases the efficiency of the formulas delivery rate to the muscle tissue, thus making it more effective than protein powders without added amino acids.

Changes for the Better

New Musashi WPI supersedes our two previous WPIs, with a better taste profile, the addition of full spectrum essential amino acids, the use of the superior form of Instantised Microfiltered Filtered WPI, and a full range of sizes to suit everyone's needs.

WPI Chocolate	Average Quantity	
	per serve	per 100g
Energy	503kj 120 cal	1676kj 401 cal
Protein	26.6g	88.7g
Carbohydrate	0.4	1.4g
<i>sugar</i>	0.1g	0.1g
Fat	0.5g	1.6g
<i>saturated</i>	0.2g	0.7g
Sodium	36mg	120mg

Serving Size: 30g
(approx 2 scoops)
Servings per package
400g = approx. 13 serves
900g = approx. 30 serves
1.9kg = approx. 63 serves

WPI Strawberry	Average Quantity		WPI Vanilla	Average Quantity	
	per serve	per 100g		per serve	per 100g
Energy	497kj 119 cal	1657kj 396 cal	Energy	503kj 120 cal	1677kj 401 cal
Protein	27.3g	91.0g	Protein	27.5g	91.6g
Carbohydrate	0.1g	0.1g	Carbohydrate	0.1g	0.1g
<i>sugar</i>	0.1g	0.1g	<i>sugar</i>	0.1g	0.1g
Fat	0.4g	1.2g	Fat	0.3g	1.1g
<i>saturated</i>	0.1g	0.4g	<i>saturated</i>	0.2g	0.5g
Sodium	39mg	130mg	Sodium	39mg	130mg

WPI Chocolate Ingredients: Microfiltered Instantised Whey Protein Isolate, Essential Amino Blend (L-Lysine, L-Histidine, L-Leucine, L-Arginine, L-Isoleucine, L-Valine, Glycine, L-Tyrosine, L-Threonine, L-Methionine), Cocoa, Milk Solids, Xanthan Gum, Flavour, Guar Gum, Sucralose

WPI Strawberry Ingredients: Microfiltered Instantised Whey Protein Isolate, Essential Amino Blend (L-Lysine, L-Histidine, L-Leucine, L-Arginine, L-Isoleucine, L-Valine, Glycine, L-Tyrosine, L-Threonine, L-Methionine), Milk Solids, Xanthan Gum, Guar Gum, Natural Colour, Flavour, Sucralose

WPI Vanilla Ingredients: Microfiltered Instantised Whey Protein Isolate, Essential Amino Blend (L-Lysine, L-Histidine, L-Leucine, L-Arginine, L-Isoleucine, L-Valine, Glycine, L-Tyrosine, L-Threonine, L-Methionine), Milk Solids, Xanthan Gum, Guar Gum, Flavour, Sucralose