



PectaSol-C[®] Modified Citrus Pectin

Supports Cellular Health*

PectaSol-C[®] Modified Citrus Pectin (MCP) is a natural product that is derived from the peel pith of citrus fruit. It is formulated to:

- Support healthy cellular growth*
- Promote normal tissue health*
- Support healthy immune function*

Pectin Chemistry

Pectin is a soluble dietary fiber composed of galacturonic acid and varying amounts of galactose, glucose, rhamnose, and arabinose. In its natural state, the galacturonic groups are found esterified. Regular pectin is not absorbed due to its large size, but it nevertheless plays a key dietary role in supporting digestive and cardiovascular health. It is also commonly used as a gelling agent in foods.

PectaSol-C[®] MCP

PectaSol-C MCP is a special class of pectin that was developed by Isaac Eliaz, MD, LAc. Dr. Eliaz has researched and published articles on citrus pectin for over a decade.¹ MCP is protected by US patents #6,274,566, #6,462,029, and #7,026,302. PectaSol-C MCP is produced using a scientifically validated proprietary process that carefully controls both the molecular weight (MW) and degree of esterification (DE). The specific low molecular weight size range of PectaSol-C[®] MCP allows easy absorption into the bloodstream with the effective range of molecular size and esterification.*

Pectin as an Alternative Ligand for Galectin-3

Aberrant cells that have lost control of their cell cycle tend to proliferate, spread to other parts of the body (metastasis), and stimulate new blood vessel growth (angiogenesis). Researchers have proposed that the invasive tendencies of such cells are supported by the over expression of galectin-3 molecules on their surface. Aberrant cells of the prostate, breast, colon, lung, lymphatic system, skin, brain, larynx & others have been found to express increased numbers of galectin-3 molecules.^{2-7*}

Pectin as an Alternate Ligand for Galectin-3

Galectin-3 molecules function by binding to galactose residues on neighboring cells and blood vessels allowing aberrant cells to aggregate and spread. De-esterified pectin is an alternate ligand (binder) for galectin-3 (receptor) molecules. When galectin-3 binds to the galacturonic acid in pectin, it is unable to adhere to other cells.*

Early Research on MCP

In the 1990's researchers demonstrated that oral administration of citrus pectin modified to be less than 10kD and with a low DE would interfere with the ability of aberrant cells to proliferate adhere to each other, or adhere to the inner walls of blood vessels.^{8*} Their research suggested that MCP, as an alternate ligand for galectin-3, could be a valuable

nutritional supplement for supporting cellular health.^{9,10*}

Pre-Production Research on PectaSol[®] MCP

Dr. Eliaz developed the PectaSol[®] brand as the first modified citrus pectin for human use. This MCP is designed to be a superior ligand for galectin-3 and involved extensive pre-production research. A cell culture model using aberrant prostate cells was used to help determine the optimal MW and DE by demonstrating cytotoxicity (cell death).^{11*} After optimization, PectaSol[®] was immediately tested clinically.^{11,12}

Clinical Trials

PectaSol[®] is the only brand of modified citrus pectin that has been validated in human clinical trials.^{11,12,13} PectaSol-C[®] MCP is an integral part of Dr. Eliaz' Healthy Cellular Support Protocols.

Recent Developments

The modification process has been improved to now produce more pectin molecules in the effective lower range of molecular weight. The drying process has also been improved to produce a finer particle size as well, with more than 90% below 100 microns. This means a better absorbed product.* The new recent developments have been clinically demonstrated to benefit the quality of life of advanced state conditions.¹³

This product is called PectaSol-C[®] to differentiate the improved modification.

Other Benefits

A clinical trial demonstrated PectaSol[®]'s ability to bind and remove toxic heavy metals and while not affecting essential minerals.^{14*} Heavy metal removal with PectaSol[®] has been shown in case studies to play a possible role in the clinical outcome of chronic diseases.^{15*} A recent study reported that PectaSol significantly decreased lead levels in children (ages 5 to 12) who suffered from severe lead poisoning.^{16*}

PectaSol-C[®] MCP contains polysaccharide components that researchers have shown shift T cell balance to favor Natural Killer (NK) cell activation.^{17*}

References

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*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.



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Contraindications

Research has shown no adverse effects or toxicity even with long term use. Since MCP is a dietary fiber; some individuals may experience loose stools at the start of use. Although there are no known drug interactions with MCP, it is recommended that it be taken 2 hours before or after medications or other supplements because dietary fibers have the potential of binding to drugs and may affect absorption.

PectaSol-C[®] MCP is buffered with potassium or sodium. In the production of PectaSol-C[®] MCP, the ratio of sodium to potassium is carefully controlled to resemble the ratio naturally present. People with a health condition requiring the restriction of potassium should consult their health care provider before using this product.

Quality Control

PectaSol-C[®] MCP is produced under cGMP manufacturing guidelines. Every batch of PectaSol-C[®] MCP is tested to ensure its quality and purity.

How Supplied

Capsules: 90 or 270 vegetable capsules per bottle.
Powder: 150 or 454 grams per bottle.

Suggested Use

Capsules: For active support; 6 capsules, 3 times a day. For long term maintenance, 6 capsule daily.

Powder: For active support; 1 scoop (5 grams), 3 times a day added to water or juice. For long term maintenance, 1 scoop (5 grams) daily, or as directed by your health care provider.

PectaSol-C[®] MCP is best taken on an empty stomach. An empty stomach is considered 30 minutes before food and 2 hours after meals.

Supplement Facts

Serving Size: 6 Capsules

Servings Per Container: 15 (90ct) or 45 (270ct)

Amount Per Serving	% Daily Value**	
Total Carbohydrate	4g	1%
Dietary Fiber	3g	12%
Sodium	170mg	7%
Potassium	410mg	12%
PectaSol-C [®] Modified Citrus Pectin	4.8g	†

** % Daily Value is based on a 2,000 calorie diet.

† Daily Value not established.

Other Ingredients: Vegetable capsule (natural vegetable cellulose, water) stearic acid, magnesium stearate, microcrystalline cellulose, silicon dioxide.

Supplement Facts

Serving Size: 1 scoop (5 grams)

Servings Per Container: 30 (150g) or 90(454g)

Amount Per Serving	% Daily Value**	
Total Carbohydrate	4g	1%
Dietary Fiber	3g	12%
Sodium	180mg	7%
Potassium	420mg	12%
PectaSol-C [®] Modified Citrus Pectin	5g	†

** % Daily Value is based on a 2,000 calorie diet.

† Daily Value not established.

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