



PectaSol® Modified Citrus Pectin

Supports Healthy Cellular Growth*

PectaSol® Modified Citrus Pectin (MCP) is a natural product derived from the peel of citrus fruit. It is designed to:

- Support normal cell growth*
- Support healthy detoxification *
- Support the cardiovascular system*
- Be easily absorbed*

Pectin Chemistry

Pectin is a soluble dietary fiber composed of galacturonic acid and varying amounts of galactose, glucose, rhamnose, and arabinose. In its crude state the galacturonic groups are found esterified. Although pectin is not absorbed due to its large size (MW=300kD), it plays an important role in a healthy diet and supports cardiovascular health.*

PectaSol® MCP

PectaSol® MCP is a special class of pectin that was created by Dr. Eliaz in 1995 and is protected by US patents #6,274,566, #6,462,029, and #7,026,302. EcoNugenics® produces PectaSol® MCP using a scientifically validated proprietary process that carefully controls both the molecular weight (MW) and degree of esterification (DE). The specific molecular weight of PectaSol® MCP fosters easy absorption into the bloodstream.

Based on Sound Scientific Evidence

Cells that have lost control of their cell cycle tend to proliferate, spread to other parts of the body, and stimulate angiogenesis. Researchers have proposed that the invasive tendencies of such cells are supported by the presence of galectin-3 molecules on their surface. Aberrant cells of the prostate, breast, colon, lymphatic system, skin, brain, and larynx have been shown to express increased numbers of galectin-3 molecules.¹

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. Unesterified pectin is an alternate ligand for galectin-3 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 at Wayne State University demonstrated that oral administration of a 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, as well as to the inner walls of blood vessels.^{2*} Their research suggested that MCP, as an alternate ligand for galectin-3, could be a valuable nutritional supplement for supporting cellular health.^{3,4*}

Pre-Production Research on PectaSol® MCP

Dr. Eliaz developed PectaSol® MCP as the first modified citrus pectin for human use. PectaSol® MCP was designed to be a superior ligand for galectin-3 and involved extensive pre-production research. A cell culture model using human cells was used to determine optimal MW and DE.^{5*} After optimization, PectaSol® was immediately tested clinically.⁶

Clinical Trials

PectaSol® MCP is the only form of modified citrus pectin that has been validated in human clinical trials.^{7,8} PectaSol® MCP is an integral part of Dr. Eliaz's Healthy Prostate and Breast Protocols.

Other Benefits

PectaSol® MCP contains polysaccharide components that researchers have shown shift T cell balance to favor NK cell activation (activates TH-1 immunity).⁹ PectaSol® MCP's ability to modulate the immune system defines its role in supporting healthy immune function.* A clinical trial using PectaSol® MCP demonstrated its ability to bind and remove toxic heavy metals and not effect essential minerals.¹⁰ Heavy metal removal with MCP has been shown in case studies to possibly play a role in clinical outcome of chronic diseases.¹¹

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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Advisory Notes on Usage

Since PectaSol[®] MCP is a dietary fiber; some individuals may experience loose stools when beginning PectaSol[®] MCP. This may naturally normalize. Alternately, use can be discontinued and then restarted at a lower intake level, building up to the recommended amount.

Contraindications

The scientific research on MCP and observations of clinicians report no adverse affects or toxicity even with long term use. Although there are no known drug interactions with MCP, it is recommended that it be

taken two hours before or after drug ingestion because dietary fibers have the potential of binding to drugs and may affect absorption.

Pectin is found naturally associated with potassium or sodium. (A positively charged ion is needed to balance the negatively charged pectin.) In the production of PectaSol[®] MCP, the ratio of sodium to potassium is carefully controlled in order to minimize any negative impact these ions may have. People with a health condition requiring the restriction of potassium should consult their health provider before using this product.

Manufacturing

EcoNugenics[®] produces PectaSol[®] MCP that matches the research specifications by using a scientifically validated proprietary process that carefully controls both the molecular weight (MW) and degree of esterification (DE). The MW and DE for each batch are verified by state of the art analytical methods in a certified laboratory.

Quality Control

PectaSol[®] MCP is produced under conditions that meet or exceed cGMP manufacturing guidelines as defined by the FDA. Every batch of PectaSol[®] MCP is thoroughly tested to ensure microbiological or heavy metal contamination meet specifications.

How Supplied

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

Suggested Use

Capsules: 6 capsules, 3 times a day
Powder: 1 scoop (approximately 5 grams), 3 times a day added to warm water, juices, blended drinks or foods or as directed by your health care provider.

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	90mg	4%
Potassium	580mg	15%
PectaSol [®] Modified Citrus Pectin	4.8g	†
**Percent Daily Value (%DV) are based on a 2,000 calorie diet.		
† Daily Value not established.		

Supplement Facts		
Serving Size: 1 Scoop (5 grams)		
Servings Per Container: 30 (150g) or 90 (454g)		
Amount Per Serving	% Daily Value**	
Total Carbohydrate	3.5g	1%
Dietary Fiber	3.1g	12%
Sodium	90mg	4%
Potassium	600mg	15%
PectaSol [®] Modified Citrus Pectin	5g	†
**Percent Daily Value (%DV) are based on a 2,000 calorie diet.		
† Daily Value not established.		