

# PektiCLEAN<sup>®</sup> *micro*

Micro-pectin fibre with specific binding properties

Functional food



## Cell-active – Loosening – Binding – Eliminating

The nutritional physiological ingredient of PekiCLEAN<sup>®</sup> consists of 100% natural pectin fibre. This has a particularly high, low molecular weight content of 60%. The only competitor product in the world only reaches a maximum content of 8%, so that one would have to take eight times the amount to reach the amount in one sachet with PekiCLEAN<sup>®</sup>.

## Nature of micro-pectins (according to literature)

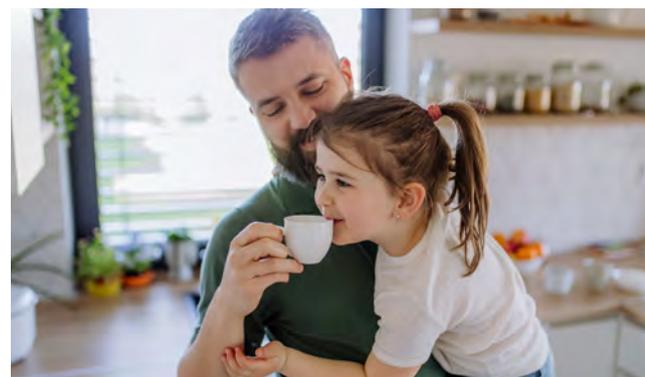
- special ability to bind pollutants and toxins
- to penetrate of the intestinal wall mucous membranes
- to support the effect in the serum and body cells themselves
- to aid a highly efficient elimination of pollutants and toxins via the liver and kidneys

## Use of micro-pectins to support the nutritional situation

- with (regular) excretory cures, in particular in the case of excretory crises
- of smokers, burdened occupational groups, with environmental pollution
- during weight-loss diets
- with amalgam removals

## Recommended intake

- Adults: 1 time daily 1 bag (1g)
- Children (depending on body weight): 1 time daily ½ – 1 bag (0.5 – 1g)
- Take at least 2 to 3 hours after your last meal i.e. in the evening before going to bed and/or in the morning at least 30 minutes before breakfast. Best is to take sober so that the micro-pectins do not react with the stomach content “prematurely” but can be absorbed by the small intestine.



- Take care for increased drinking of good quality water. The excretion can lead increasingly to thirst and urge urinating.
- As a curative phase, over 10 to 30 days, possibly also several times a year.
- Supportive application while excretory cures or detox treatments, as required, several times a day.

There are no restrictions or incompatibilities known. Suitable for vegetarians.

Nutrients PectiCLEAN® micro  
Per 1g = 1 Bag (daily recommendation)

| Nutrients                                   | Per 100 g      | Per 15 g    |    |
|---------------------------------------------|----------------|-------------|----|
| Energy/calorific value                      | 180 kcal/750kJ | 2 kcal/8 kJ |    |
| Fat                                         | 0 g            | 0 g         | -- |
| Carbohydrate                                | <1g            | <0.01g      | -- |
| Salt                                        | 0 g            | 0 g         | -- |
| Protein                                     | <1g            | <0.01g      | -- |
| Fibre<br>(thereof soluble fiber 0.9 g/90 g) | 90 g           | 0.9 g       | -- |

RDA: % of the Recommended Daily Amount

## Micro and macro pectin – molecule size and scope of action

Pectins occur in many plants, fruits and vegetables and are an integral part of our diet. As swellable, water- soluble fibre, they belong to the so-called bioactive substances that are not digested in the small intestine and are well-tolerated by the body. In plants, pectin can be present in different molecular sizes. In the natural world, pectins occur only in connection with other substances (mainly polysaccharides), which limits their operating range as they only become effective in the large intestine in high-molecular macro form (long-chain). Normal macro pectin cannot be digested or reabsorbed in the small intestine, but to a local extent it is able to bind undesirable substances here during its passage.

Micro pectins (low-molecular weight and short-chain), however, are also able to enter the serum and cell walls. In therapeutic use, a clear distinction must be drawn between these and their high-molecular brothers – the macro pectins in apples, pineapple or citrus fruits.

Micro pectin molecules are low-molecular i.e. tiny

The low molecular size of micro pectin leads to a larger surface area and thus a larger adaptation area for substances. Much like other low-molecular weight nutrients, very small molecules are able to penetrate the intestinal barrier, thus working their effect in the body itself, not just the bowel. Like all dietary fibres, it has a special binding capacity for unwanted substances, also such as pollutants and toxins.



In Burgerstein's handbook of nutrients, low molecular pectins are characterized by the ability to "Binding of heavy Metal in the Intestine and Blood."

According to Burgerstein's, the excretion is carried out via the "Stool and the kidney, without damage to the kidney tissue".

(Burgerstein, 11th edition, May 2007, p. 563)

In this way, a very high proportion of low-molecular pectin can penetrate the blood vessels and therefore the cells. In some cases, micro pectins are so small that they are even able to pass through the blood-brain barrier and the central nervous system. The low-molecular mass is able to interact with the plasma membrane receptors of lymphocytes, which in turn regulate the immune system. Micro-pectins therefore offers unique possibilities in nutritional medicine.

Low-molecular pectins or micro pectins are a comparatively young class of chelates of biological origin. They are unsaturated and negatively charged. Its zigzag shape encloses positively-charged harmful substances like a pincer in order to achieve a saturated state. This is similar to two magnets in which the plus and minus pole are mutually attracted. The negatively charged pectins are able to bind positively charged substances in an extremely strong but also very small complex, which is then easy to excrete from the body via the liver and kidneys.

### Binding priorities

As a binding partner, "heavy" ions with a higher proton or nuclear charge number are preferred. Mainly these are metals and their compounds, or substances which are not stable due to their high nuclear charge pressure and consequently partly decompose with an emission of particle radiation (radioactivity). On the other hand, valuable minerals such as potassium, calcium or magnesium are spared, since these have a low number of nuclear charges. Adsorbed substances are bound in very small but extremely solid complexes and can be fully excreted without delay. To date, nutritional medicine has barely looked at this property of micro-fibre.

#### Macro-pectin chains

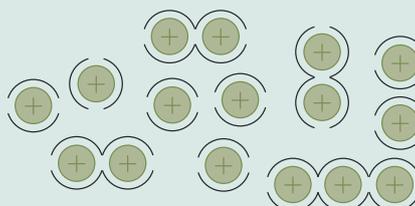
Long-chain, high-molecular



Such as in pineapple, citrus or apple pectin. Macro-pectins are particularly active in the intestine.

#### Micro-pectin chains

Short-chain, low-molecular



Such as PectiCLEAN® micro. Micro-pectines are much smaller and more agile.

## Ingredients

100% pectin (polygalacturonan), with a low-molecular weight content of 60%

## How to prepare

Bring approx. 100 ml water to the boil. Fill a glass and stir in 1 bag (1g) of PectiCLEAN® (stainless steel spoon) until the powder has totally dissolved. Drink warm and in small sips. Do not consume the powder undissolved or dry.

## Content

10 bags (1g) / 10g. Sufficient for 10 days.

PectiCLEAN® can be obtained from:



Legal note: This product is for nutrition and therefore does not affect any Drug Act of any country. A good nutritional status can help the organism prevent or to overcome diseases. All statements describe characteristics and physiological effects, which can be different for consumers, and do not constitute a healing or health promise.

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