

# Cysticol



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## Ingredients:

Cranberry (*Vaccinium macrocarpon* Aiton.) fruit d.e. tit. 25% Proanthocyanidine; D-Mannose; Sweeteners: Erythritol, Sucralose; Aroma; Acidifier: Citric acid; Anti-caking agent: Gelled silica 200; Emulsifier: Sucrose esters; Chondroitin sulfate sodium; Vitamin C (L-ascorbic acid); Hyaluronic acid.

## References:

<https://academic.oup.com/cid/article/38/10/1413/345228>

<https://www.liebertpub.com/doi/10.1089/jicm.2021.0300>

[https://www.researchgate.net/publication/273414802\\_Oral\\_D-mannose\\_in\\_recurrent\\_urinary\\_tract\\_infections\\_in\\_women\\_A\\_pilot\\_study](https://www.researchgate.net/publication/273414802_Oral_D-mannose_in_recurrent_urinary_tract_infections_in_women_A_pilot_study)

<https://www.euti.org/journal/view.html?doi=10.14777/uti.2022.17.2.36>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3784967/>

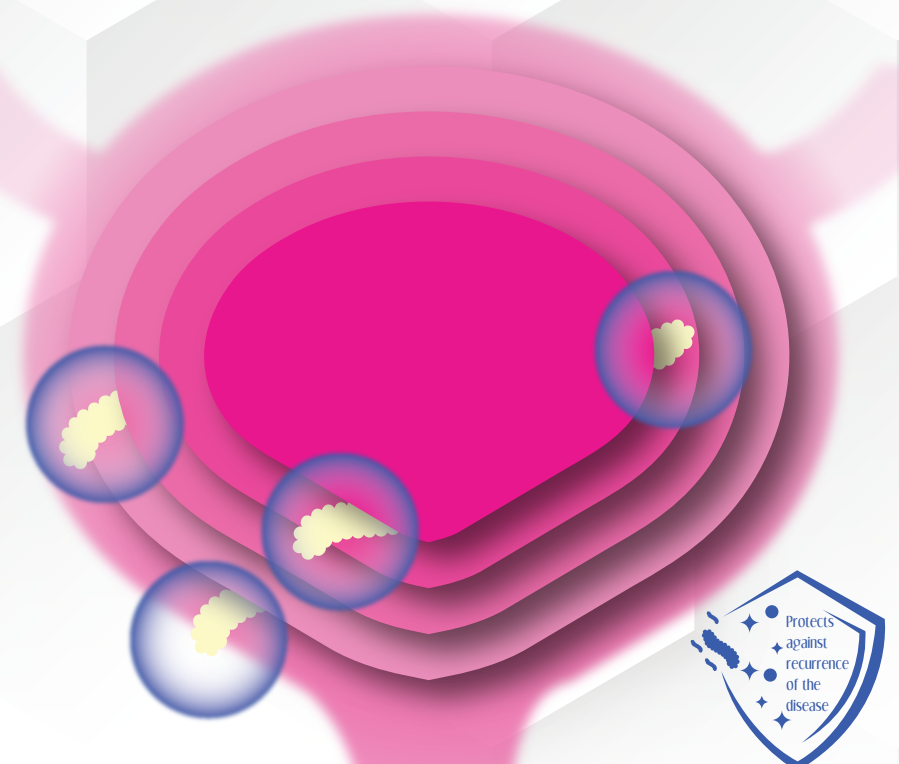
Average contents	Per 1 sachet	NRV%*
D-mannose	1g	
Cranberry d.e.	289mg	
of which Proanthocyanidins	72mg	
Chondroitin sulfate sodium	200mg	
Vitamin C	120mg	150%
Hyaluronic acid	100mg	

(\* ) Nutrient reference value

**How to use:** In the treatment of acute phases: take 2 sachets a day to be dissolved in a glass of water (at least 100 ml) with an empty bladder away from meals for at least a week, and then proceed with 1 sachet a day for at least 2 weeks. In case of a milder symptomatologic picture or prevention of recurrences: the recommended dosage is 1 sachet per day for 2 weeks per month. It is recommended to drink at least 2 liters of water a day to facilitate diuresis.

Unique formula for urinary tract and bladder health.

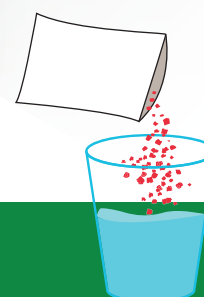
- Cranberry
- D-Mannose
- Chondroitin
- Vitamin C
- Hyaluronic acid



## Marketing Authorisation holder:

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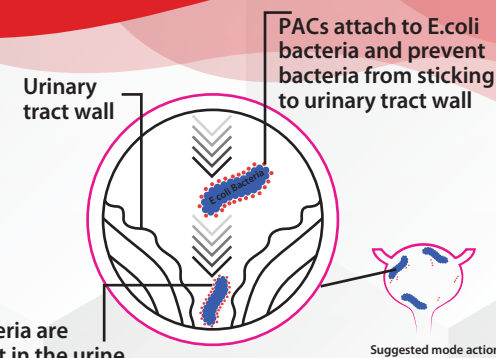


 Made in Italy

14 Sachets 4g



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Unique formula for urinary tract and bladder health that exerts two actions:

- Thanks to the presence of hyaluronic acid and chondroitin sulfate, it helps maintain good impermeability of the bladder by preventing the reabsorption of toxic substances contained in the urine.
- D-Mannose binds to the structure of many bacteria, including Escherichia Coli, promoting their elimination through urine. Cranberry is able to exert an antibacterial, antioxidant action and regulate the pH of urine.

**Cranberry:** Proanthocyanidins (PACs), a component of cranberries, inhibit the adherence of p-fimbriated Escherichia coli on uroepithelial cells of the bladder, preventing the adherence of bacteria to the mucosal surface of the urinary tract and thereby inhibiting bacterial proliferation. In women with recurrent urinary tract infections (UTIs), long-term antimicrobial prophylaxis is indicated. This method is effective but can cause adverse reactions and can increase the emergence of antimicrobial resistance. Therefore, the need for alternative therapies for UTI prophylaxis is evident. Cranberries are one nonantibiotic alternative.



## D-Mannose:

is a monosaccharide that can inhibit bacterial adhesion to the urothelium after oral intake. Several clinical studies have shown the efficacy of d-mannose in the prevention of recurrent UTIs. D-mannose can bind type 1 fimbriae of UPEC forming a physical "coating", which is not harmful to the bacteria, but can prevent their binding to the urothelium and, therefore, the onset of the disease. In a randomized cross-over trial female patients with acute symptomatic UTI and three or more recurrent UTIs during the preceding 12 months, patients were randomly assigned to antibiotic treatment with trimethoprim/sulfamethoxazole or to a regimen of oral D-mannose 1 g 3 times a day, every 8 hours for 2 weeks, and subsequently 1 g twice a day for 22 weeks, as a result, the Mean time to UTI recurrence was 52.7 days with antibiotic treatment and 200 days with oral D-mannose.

## Hyaluronic acid and Chondroitin sulfate:

Bladder epithelium is not only a simple defense against infections, but it is also a specialized tissue regulating complex bladder functions and playing an active role in the pathogenesis of many bladder diseases. There is strong evidence that different chronic inflammatory bladder diseases, such as recurrent urinary tract infection (UTI), chemical or radiation cystitis, and painful bladder syndrome/interstitial cystitis (PBS/IC), can be pathophysiologically linked in the first step of the disease to the loss of the glycosaminoglycan (GAG) mucous layer independently of the original cause of the inflammatory process.

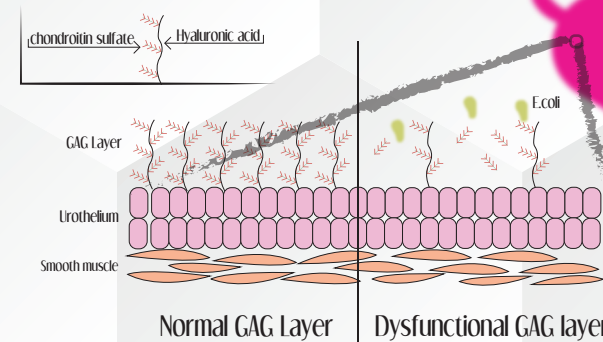
## Chondroitin sulfate:

is an acidic mucopolysaccharide and is one of the most prevalent bladder GAG components.

## Hyaluronic acid:

is a chain of repeating disaccharide subunits. It provides a backbone to which core proteins are linked. These core proteins, in turn, are linked to large numbers of chondroitin sulfate molecules.

Hyaluronic acid and chondroitin sulfate, alone or in combination, efficiently counteract induced bladder cell damage and inflammation through re-establish epithelial integrity by GAGs binding to proteoglycans or interacting with structural urothelium.



In a study, 40 women with an acute diagnosis of cystitis received a single sachet of Fosfomycin Tromethamine (3gr). The subjects were then randomly assigned to two groups: Group A: 20 women were given a dietary supplement containing cranberry extracts (S&R PACs), D-mannose, hyaluronic Acid, Chondroitin, and vitamin C, 2 sachets per day during the first 7 days, then 1 sachet per day for two weeks; Group B: 20 women did not receive any treatment to serve as a control group. Patients in Group A had a lower incidence of episodes of recurrent cystitis during treatment and follow-up; urine samples had significantly lower median bacterial load compared to baseline as well as a symptomatic relief was reported in treated subjects despite the control group.

## Vitamin C:

Given its anti-infectious and immunomodulatory properties on one side and the lack of unwanted side effects on the other, vitamin C constitutes a promising antibiotic-independent strategy to combat and/or prevent bacterial (including enteropathogenic) infections. In vitro data now suggest that vitamin C can have a bacteriostatic effect in the urine. This effect was shown to be mediated by the reduction of urinary nitrites to reactive nitrogen oxides rather than by lowering urinary pH.



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