

Acetic acid - description, benefits, effects on the body and the best sources

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Abstract. When we hear the word vinegar, our mouth involuntarily feels as if we had eaten a kilogram of lemons without sugar. However, if you turn to chemists, you can find out that in fact, vinegar is an aqueous solution of acetic acid. It is an acidic, colorless liquid with a characteristic odor and taste. In concentrated form, it can cause significant harm to humans. Therefore, we use only its aqueous solutions for food.

Key words: Acetic acid, general characteristics, daily requirement, digestibility, beneficial properties, signs of deficiency, signs of excess

Foods rich in acetic acid:

- Table vinegar
- Apple cider vinegar [1]
- Wine vinegar
- Milk serum
- Honey [2]
- Grapes [3]
- Dates [4]
- Figs
- Apples [5]
- Sugar cane
- Sugar beet [6]
- Malt
- Wheat
- Banana [7]
- Watermelon [8]

general characteristics

Based on its origin, vinegar is divided into industrial and household. Industrial vinegar is available in the form of 3, 6 and 9% acetic acid solution. As for homemade vinegar, despite the fact that its acidity percentage is lower, it is more beneficial for humans.

This is due to the fact that in addition to the acid itself, homemade vinegar contains a large amount of vitamins and microelements. Moreover, the name of vinegar depends on the products from which it is made, for example, apple, grape, date, etc. In addition, there is the so-called balsamic vinegar, made from wine vinegar to which aromatic herbs have been added.

Daily requirement for vinegar (aqueous solution of acetic acid):

Despite the fact that this substance is very popular in cooking, unfortunately, there is no data on its daily requirement.

The need for vinegar increases:

Due to the fact that this substance is not vital, modern medicine does not know of cases when a person needed an increased amount of vinegar.

The need for acetic acid decreases with:

- gastritis;
- stomach ulcer;
- inflammation of the gastrointestinal tract.

This is caused by the irritating effect of vinegar on the mucous membranes.

In addition, vinegar should be avoided if you are hypersensitive to acetic acid.

Absorption of acetic acid

When using vinegar to prepare meat, fish or vegetable dishes, the latter are absorbed much better. This is due to the fact that vinegar is able to affect proteins [9], increasing the degree of their absorption by the body.

Beneficial properties of acetic acid and its effect on the body

Traditional medicine widely uses vinegar for:

- insect bites;
- high temperature [10];
- tonsillitis;
- pharyngitis;
- fungal infections of the feet;
- thrush;
- rheumatism;
- arthritis, etc.

Moreover, for each of these diseases, there are individual ways to use vinegar. For example, to treat colds, they use spraying vinegar in the room where the patient is.

It was also noticed that simply wiping the skin with a vinegar solution can relieve itching and inflammation from stings of bees, wasps, hornets, jellyfish, and even reduce pain from sunburn.

Apple cider vinegar has a beneficial effect on the body, normalizing the metabolic processes occurring in it. In addition, due to the presence of pectin, it is also able to reduce cholesterol levels [11]. It also alleviates the condition of the patient with arthritis.

If you have kidney disease and the presence of stones in them, just 1-2 teaspoons of vinegar (apple vinegar) in a glass of water with the addition of one teaspoon of honey will significantly speed up recovery. Naturally, provided that such a drink will be consumed regularly and not just once.

Vinegar can also help with diabetes. To do this, before going to bed, take 2 teaspoons of apple cider vinegar dissolved in a glass of drinking water [12]. This will lower blood sugar levels and alleviate the patient's condition.

Interaction with other elements:

If we talk about the interaction of acetic acid with essential elements, in the first place are proteins, which under the influence of vinegar become softer, which significantly affects their taste and quality of digestion.

In second place are carbohydrates [13], which with the help of vinegar are converted into compounds that are easier to digest.

The list includes fats [14] that interact with vinegar in minimal quantities.

Signs of excess acetic acid in the body

Heartburn. If you consume a large amount at once, there is a high risk of getting a burn to the esophagus, after which nutrition will be provided exclusively in the form of droppers and nutritional enemas.

There were no signs of a lack of acetic acid in the body.

Acetic acid for beauty and health

In cosmetology, vinegar has also earned honor and respect. How much are vinegar wraps worth! Thanks to them, you can even get rid of the disgusting “orange peel” [15].

Also, thanks to its antibacterial properties, vinegar helps cleanse skin pores [16] and helps fight acne and dandruff. To do this, after washing your hair, you need to rinse it with a vinegar solution, which will give your hair shine and strengthen it.

And if you take into account the fact that vinegar is an environmentally friendly product, it can easily be considered one of the best body care products.

Literature

1. Shelestun, A., & Eliseeva, T. (2022). Apple cider vinegar for beauty and health: scientific facts about the benefits, harm and use for weight loss. *Journal of Healthy Eating and Dietetics*, 3 (21), 12-17. DOI: 10.59316/.v 3i21.189
2. Tkacheva, N., & Eliseeva, T. (2023). Honey for human health – description of types (40+), features and beneficial properties of each, recommendations for use. *Journal of Healthy Eating and Dietetics*, (25). DOI: 10.59316/j.edaplust.2023.25.14

3. Tarantul, A., & Eliseeva, T. (2019). Grapes (lat. Vitis). *Journal of Healthy Eating and Dietetics*, (10), 14-25. DOI: 10.59316/.vi10.54
4. Yampolsky, A., & Eliseeva, T. (2020). Dates (Phoenix dactylifera). *Journal of Healthy Eating and Dietetics*, (14), 38-50. DOI: 10.59316/.vi14.89
5. Tkacheva, N., & Eliseeva, T. (2021). Apples - benefits and harms proven by nutritionists. *Journal of Healthy Eating and Dietetics*, 3 (17), 84-88. DOI: 10.59316/.vi17.130
6. Eliseeva, T., & Tkacheva, N. (2019). Beetroot (lat. Beta vulgaris). *Journal of Healthy Eating and Dietetics*, 2 (8), 51-61. DOI: 10.59316/.vi8.43
7. Eliseeva, T., & Tarantul, A. (2018). Banana (Musa). *Journal of Healthy Eating and Dietetics*, 3 (5), 31-43. DOI: 10.59316/.vi5.24
8. Eliseeva, T., & Tarantul, A. (2019). Watermelon (lat. Citrullus lanatus). *Journal of Healthy Eating and Dietetics*, 3 (9), 44-56. DOI: 10.59316/.vi9.50
9. Eliseeva, T., & Shelestun, A. (2019). Protein - description, benefits, effect on the body and the best sources. *Journal of Healthy Eating and Dietetics*, 1(7), 54-78. DOI: 10.59316/j.edpl.2018.7.6
10. Tkacheva, N., & Eliseeva, T. (2020). Food to reduce fever. *Journal of Healthy Eating and Dietetics*, (11). DOI: 10.59316/j.edpl.2020.11.41
11. Tkacheva, N., & Eliseeva, T. (2020). Foods to lower cholesterol. *Journal of Healthy Eating and Dietetics*, (11). DOI: 10.59316/j.edpl.2020.11.15
12. Eliseeva, T., & Shelestun, A. (2018). Water - description, benefits, effects on the body and the best sources *Journal of Healthy Nutrition and Dietetics*, 1(7). DOI: 10.59316/j.edpl.2018.7.9
13. Eliseeva, T., & Shelestun, A. (2018). Carbohydrates - description, benefits, effect on the body and the best sources. *Journal of Healthy Eating and Dietetics*, 1(7). DOI: 10.59316/j.edpl.2018.7.8
14. Eliseeva, T., & Shelestun, A. (2019). Fats - description, benefits, effects on the body and the best sources. *Journal of Healthy Eating and Dietetics*, 1(7), 78-90. DOI: 10.59316/j.edpl.2018.7.7
15. Lazareva, V., & Eliseeva, T. (2021). Nutrition for cellulite. *Journal of Healthy Eating and Dietetics*, (16), DOI: 10.59316/j.edpl.2021.16.20
16. Tkacheva, N., & Eliseeva, T. (2021). Food for the skin - 12 products for its beauty and health. *Journal of Healthy Eating and Dietetics*, 3 (17), 44-48. DOI: 10.59316/.vi17.121

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