

The Versatile Mineral

## Zinc Citrate

- Fights zinc deficiency
- High mineral content
- Neutral taste
- High bioavailability

**Jungbunzlauer**

HealthyChoices@Jungbunzlauer

# Zinc Citrate

## The Versatile Mineral

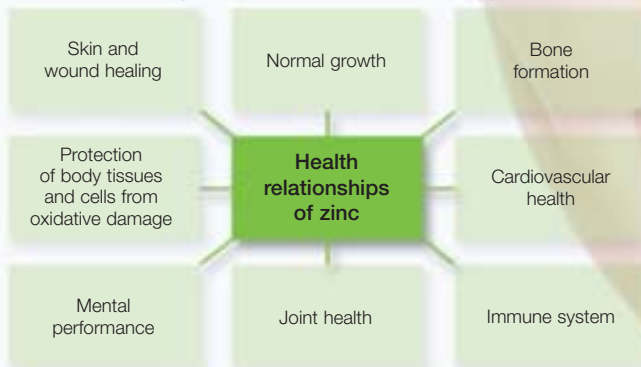
Jungbunzlauer is the global market leader for mineral salts derived from citric acid or gluconic acid. These salts are manufactured by the neutralization of the organic acids with the appropriate mineral alkaline source. Zinc citrate is the latest addition to Jungbunzlauer's range of high-purity and highly bioavailable organic mineral salts.

### Zinc requirements

The WHO Report 2002 estimates that one-third of the world's population fails to reach the recommended daily intake of zinc which is 15mg per day in Europe and the US. As an important trace element in the human body and a component in over 200 enzymes, it is involved in more enzymatic reactions than any other mineral.

Zinc affects virtually all aspects of the immune system and plays an essential role in hormonal functions such as in thyroid, insulin, growth, sexual and other hormones. Furthermore, zinc represents the basis for a healthy functioning of the human body and supports our sensory perception to smell, taste and see. On 31 July 2008, health relationships of zinc had been compiled in the consolidated EU Commission list of Art. 13 health claims on minerals. Important examples are displayed in the following figure.

### Health relationships of zinc in food and food supplements



### Key data of organic zinc salts used in food and beverages

Source	Zinc content	Taste
Zinc Citrate 3H <sub>2</sub> O*	31%	Neutral
Zinc Lactate*	22%	Neutral
Zinc Gluconate*	12%	Strong aftertaste
Zinc Acetate*	36%	Vinegar/bitter

\*permitted according to regulation EU 1925/2006

### Applications

Jungbunzlauer's zinc citrate is a trihydrate with 31% zinc content and available as a fine powder. It can be used in dental care products such as tooth-pastes, mouthwashes and chewing gums due to its antimicrobial and anti-inflammatory effects and its ability to reduce or inhibit the formation of dental plaque and tartar.

In pharmaceuticals, zinc citrate fights common colds. Since adequate zinc levels are difficult to reach via the diet, zinc is increasingly used in food supplements, functional foods and beverages.

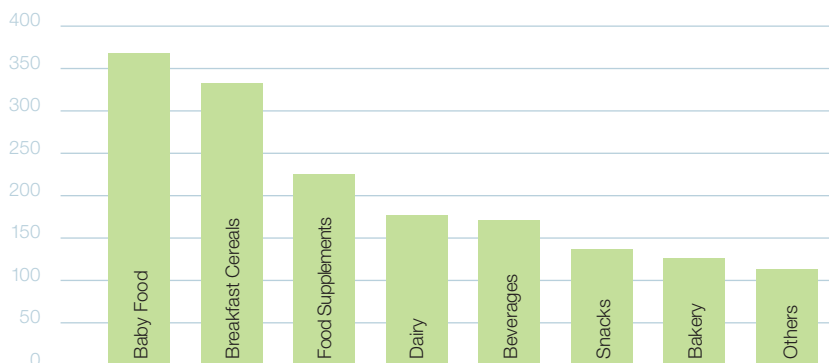
Typical applications for zinc citrate:

- Dental care products
- Food supplements
- Pharmaceutical products
- Functional foods and beverages

### Benefits of zinc citrate

- Fights zinc deficiency
- High mineral content (31%)
- Neutral taste
- High bioavailability

### Product launches with zinc in food and food supplements: Top applications 07/2007 to 06/2008



Source: gnpd database

Headquarters

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# Jungbunzlauer

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