

WATER FOOTPRINT OF GELATINE AND COLLAGEN PEPTIDES

As part of our commitment to sustainable development, the Gelatine Manufacturers Europe (GME) initiated a project to gain insight in the development of the carbon footprint of gelatine and collagen peptides produced by the GME members. The project is currently covering the years 2006 to 2021 and results are available in a separate statement.

To enlarge the insight, GME decided in 2016 to include a water footprint project covering the same period.

Scope:

The assessment was made with the cooperation of all GME members and includes all different types of raw materials and all types of processing.

In order to get clear understanding on the water footprint of the gelatine production process, the Recipe 2008 Water Depletion Method and the Water Stress Index (WSI), developed by Pfister et al. 2009, have been applied. The former gives a direct insight in the amount of water used, without any additional weighing factors. The WSI applies a factor to the water use to indicate the amount of stress attributed to the water consumption and is based on regional data.

Methodology and background data:

The impact of water from gelatine and collagen peptides production is calculated in a similar way as the carbon footprint: using economic allocation to distribute the impact of water use to the different co-products. For this, the framework used for the GME carbon footprint project was adopted to use the water depletion and water stress index factors instead of the CO₂ impact factors.

Cradle-to-gate and gate-to-gate principle:

Since the upstream water consumption, related to the supply chain of raw material, is out of the span of control of the GME members, assessment was done excluding the supply chain for the raw materials: gate-to-gate principle.

Results (gate-to-gate principle):

Water Footprint:

The results show that between 2006 and 2021, the water (depletion) footprint, excluding the supply chain of raw material, has been reduced by 9,7 %.

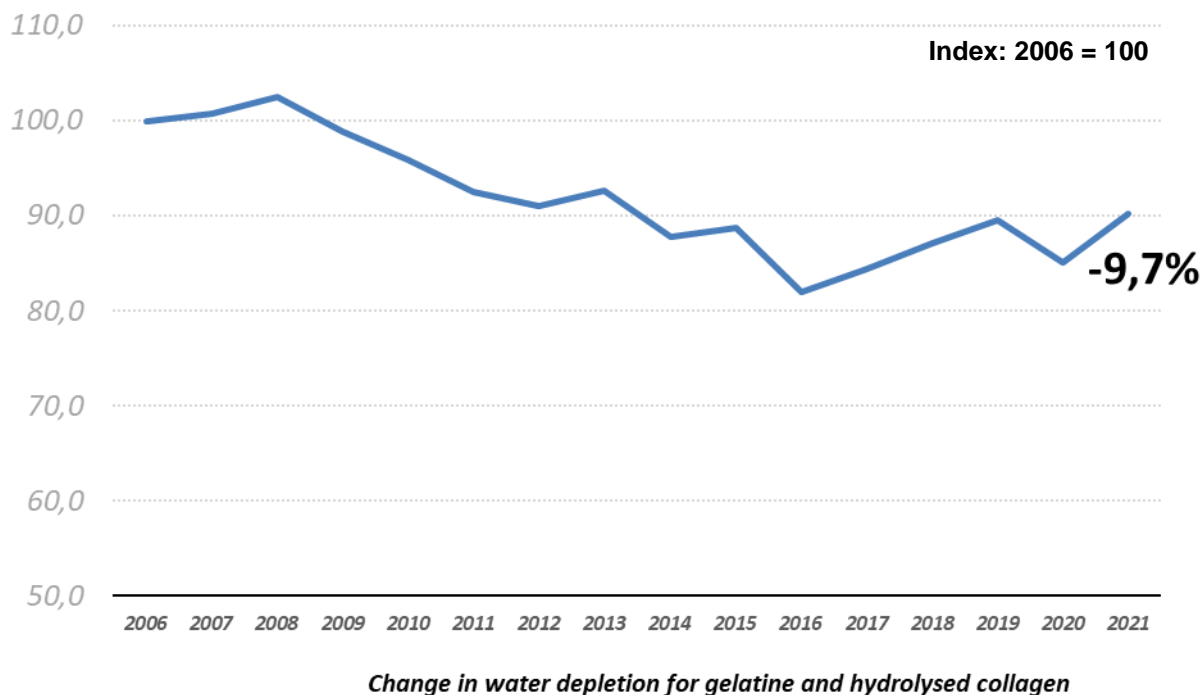


Figure 1: Weighted average water footprint per kg of gelatine and collagen peptides, excluding raw materials (supply chain), of gelatine and collagen peptides between 2006 and 2021 (relative to the total value of 2006 = 100); economic allocation based on 2019-2021 average prices.

This year we observe a slight increase in the water depletion impact with respect to the previous year 2020, but the total water depletion impact from GME members is 9,7% lower than the reference year 2006 (excluding the raw material supply chain). The improvement is mainly due to a decrease in on-site water usage.

Changes from the previous year is resulting from changes in member activities, market and/or product changes, and a slight reduction in production.

Validation period: until 31 December 2023.

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