



## Water fit for purpose

Albrechtsen, Hans-Jørgen

*Publication date:*  
2021

*Document Version*  
Publisher's PDF, also known as Version of record

[Link back to DTU Orbit](#)

*Citation (APA):*  
Albrechtsen, H.-J. (2021). *Water fit for purpose*. Abstract from IFC Water Congress, Herning, Denmark.

---

### General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

## **Hans-Jørgen Albrechtsen**

Professor

Environment, Technical University of Denmark (DTU)

Area of expertise: Drinking water quality, water fit for purpose – to select a proper water quality for a given purpose, treatment, storage, monitoring, documentation.



### **Water fit for purpose**

Usually, drinking water quality is required for water to be used in food industry. However, the drinking water is very often transformed right after the entrance in the food manufacturing factory by e.g. softening, cooling, heating, filtering, or addition of chemicals.

At this background it seems inappropriate to use drinking water quality as a standard for an appropriate water quality when upcycling water for reuse. An alternative approach is the Water-Fit-For-Purpose concept, based on identifying the needed water quality for a given purpose, and then treat the water to reach this quality.

To achieve this, treatment technologies have to be considered, as well as food safety, eco-efficiency, resource and economic issues. It is also crucial to consider all the essential parameters, and being aware of the weaknesses of a given technology since although e.g. membranes may be considered as efficient barriers, some small molecules such as organic micro pollutants, ammonia or trace metals may pass the membrane.

The Water-Fit-For-Purpose concept and its implementation is the foundation for the Danish DRIP partnership between food manufactories, technology providers, knowledge institutions and authorities – and this partnership has demonstrated that water efficiency can be improved by 20-30% in food and beverage industry.