



# Brewing, winemaking and distilling: overview of wastewater treatment and utilisation schemes. Focus on membrane penetration in brewing industry

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management

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## **Brewing, winemaking and distilling: overview of wastewater treatment and utilisation schemes.**

### **Focus on membrane penetration in brewing industry.**

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***Presentation for IWA:*** Brewing, winemaking and distilling: overview of wastewater treatment and utilisation schemes. This presentation will be based on co-authors contribution to a handbook related to water and waste-water management in food industry. The brewing, winemaking and distilling industries produce alcohol as a beverage, industrial solvent or fuel. These three processes exhibit strong similarities (fermentation and separation operations) and stand as important water consumers and wastewater producers. A benchmark of the most widely used treatment and valorisation methods will be reported in a first step. Then alternative treatments and re-engineering processes will be introduced considering industrial reality and the maturity of alternative treatments (academic lab scale; academic pilot-plant scale; industrial application/new development or industrial application/current process). A focus on the penetration of membrane processes in brewing industry will be given.