

Use of a virtual environment to teach brewing technology

Virtual Brewery

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Background

- Master specialisation: Brewing Science and Technology
- Some students do not have practical experience from the industry
- Suppliers of brewing equipment have made animations and videos available on YouTube
- Animations have been used in teaching how equipment work – also inside
- Visits to breweries and even years of experience from practical brewing can be supplemented by these animations – showing more than you can see from outside

➤ Virtual Brewery

Experience in teaching

- Show working principles during teaching of production equipment
- Students watch animations before and after lectures
- Exercises in class room to give a deeper understanding

➤ Very well received in the class:

"The virtual brewery helped a lot in understanding the equipment"

"Virtual brewery was really good, it is nice to see how the different functions work, and it gives a good overview of operations"

Demo of Virtual Brewery



Further development

- Include more animations and videos
 - Drawings and photos of equipment
 - Link to suppliers of raw materials: malt, hops, yeast, etc.
 - General food processing plant
 - Virtual Dairy
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- Own homepage can be accessed by all people in the brewing industry
 - Extend to other food industries – maybe even other processing industries
 - Include small e-learning sections and exercises/quizzes

Exercise in plate heat exchanger

Go to Virtual Brewery, Gasketed Plate Heat Exchanger:

<https://shorturl.at/qGIU1>

- Explain how the two media are flowing on each side of the plates
- What do we call the pattern in the inlet to the plate, where we achieve a uniform flow of the media over the plate?
- Is there a way we can detect leaks?

