



COLLEGE OF AGRICULTURAL AND
ENVIRONMENTAL SCIENCES
DEPARTMENT OF FOOD SCIENCE
AND TECHNOLOGY

DAVIS, CALIFORNIA 95616

HausCraftBeer™ : A BEER-MAKING DEVICE
Comments from a regulatory and environmental impact point of view
Michael J. Lewis
Professor Emeritus of Brewing Science,
University of California, Davis.

HausCraftBeer™ is a new beer-making device intended to be installed in restaurants and bars so that owners can offer to their customers a custom-designed and freshly brewed beer that is made on site. The purpose of a HausCraftBeer™ establishment, therefore, is the same as the familiar Brew-Pub and, for regulatory purposes, may be considered in the same general business category.

However, the design and operation of a HausCraftBeer™ unit is different from a typical Brew-Pub brewery and, most significantly, many of the regulatory and environmental impact considerations that are legitimate for Brew-Pubs do not apply to HausCraftBeer™ units.

This document explores these differences by making direct comparisons of the two different beer-making tasks and strategies, and comments particularly on (a) issues that regulators commonly question about Brew-Pub operations and (b) how these issues are ameliorated in the HausCraftBeer™ design.

The key difference is that most of the tasks necessary to make beer at a Brew-Pub (tasks 1 through 6 below) are done at an off-site remote brewery in the case of HausCraftBeer™, and so eliminates associated regulatory and environmental issues.

COMMENTARY:

1. Malt must be delivered to Brew-Pubs on a regular basis, often in bulk or in 50-lb sacks or bags on 2000-lb pallets. This is a truck delivery. HausCraftBeer™ raw material is much more concentrated, much smaller in volume and weight and is delivered by e.g. UPS or by typical food delivery vehicles.
2. In a Brew-Pub, malt must be milled and transferred to the mash vessel before it can be used; this is a noisy and dusty operation. For HausCraftBeer™, this operation is eliminated by being done at a remote commercial brewery.
3. A Brew-Pub must dispose of the "spent grain" (exhausted malt), usually to a farm for use as feed. Because for HausCraftBeer™ this process is handled at a remote commercial brewery, it does not generate any spent grain where it is installed or the related traffic.
4. In a Brew-Pub, the hops are boiled with the wort in a gas-fired kettle; as there is a fire-hazard associated with this, authorities require strict regulations. HausCraftBeer™ has no kettle or fire because wort boiling is done at a remote commercial brewery.
5. In the boil kettle of a Brew-Pub the essential oils of the hops evaporate and escape as a plume of steam that has a characteristic odor. Because this is a potential nuisance to neighbors, regulatory authorities often explore this issue. Again, because this process is done off-site, the HausCraftBeer™ unit does not require such regulatory scrutiny.



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6. In a Brew-Pub, the boiling wort must be cooled by a stream of cold water at least equal to the volume of beer being made. Also, large volumes of water (up to 10x the volume of beer being made), plus chemicals, such as caustic soda and chlorine, must be used in a Brew-Pub to clean and sanitize the brewing vessels. This constitutes a waste-water stream that must be disposed of in a sewer system. No water or chemicals are used to clean the HausCraftBeer™ unit because of the patented bag-to-bag-to-bag system. (see #7 & #8 below).

7. A HausCraftBeer™ unit is the same as a Brew-Pub in that both systems ferment the wort (malt extract) in an enclosed tank to make beer. However, the HausCraftBeer™ unit uses malt extract in the form of a soluble malt extract powder that was brewed dried and bagged at a remote commercial brewery. This malt extract is transferred, in a closed system directly into a bag that lines the inside of the HausCraftBeer™ unit. This process eliminates dust and the potential for contamination and disposal problems (see #8).

8. The bag inside the HausCraftBeer™ unit is a disposable plastic bag. Therefore, after beer fermentation is completed, and the beer has been transferred to a second, beer-dispensing, vessel (which also contains a disposable plastic bag) the entire fermenter bag containing the organic waste of spent yeast, plus precipitated protein is disposed of as a compact solid waste.

9. Because of the proprietary bag system used in the HausCraftBeer™ fermenter and beer- dispensing tanks, neither vessel needs to be cleaned before re-use. As noted (see #6 above), this eliminates a potentially polluting waste-water stream. The HausCraftBeer™ processes described in Items 7, 8 (above) & 9, constitute a patented "Bag-to-Bag-to-Bag" system of brewing.

10. Finally, the amount of water required for making beer in a HausCraftBeer™ unit is essentially limited to the amount of water needed to hydrate and dissolve the dried malt extract powder in the fermenter. Thus, the volume of water used equals the volume of beer produced.