1-BEER SAMPLING

Packaged Beer

Analytical data developed on a sample of beer reflect only the sample obtained. Whether the analysis is to be chemical, physical, or microbiological, the sample must be representative of the lot of beer to be examined. When submitting packaged samples (bottles or cans) those samples must be taken at random from the same lot, and the lot clearly identified. Check with our lab to know how many sample units (bottles or cans) must be sampled from each lot to perform the analysis.

Beer in process (Aseptic sampling from tanks and lines)

If you are submitting pre-packaged samples, the following procedures taken from Methods of Analysis of the American Society of Brewing Chemists (ASBC) can be followed to avoid any contamination of the samples. Where microbiological examination is to be made, special precautions must be taken to avoid contamination. Samples collected should accurately represent the microbial population of the beer inside the tank or line. Precautions must therefore be taken to avoid contamination of the beer samples during collection by organisms that may be harbored in sampling ports, zwickels, or sampling cocks. Because of the variety of sampling ports installed on brewery equipment, it is not possible to describe a sampling procedure that will apply to all situations. The method given below is by way of suggestion, rather than a standard procedure.

Apparatus required for sampling

(a) Butane (or propane) torch with brush (coarse) tip.

(b) Sterile pipe cleaners, 5-mm, or cotton swabs.

(c) Sterile sample flasks, narrow-mouth, plugged with cotton or provided with other type of aseptic closure.

(d) Sterile sampling needles, if tanks are equipped with diaphragm sampling ports.

(e) Alcohol, 70%, ethyl or isopropyl.

Method for Beer sampling

Flush sampling port by letting beer flow out of it freely for 5-10 sec with valve fully open.

Scrub clean all surfaces of sampling port that will come into contact with beer as sample is withdrawn.

Swab with sterile cotton swab or pipe cleaner soaked in 70% alcohol.

With a butane torch, flame all surfaces of sampling port that will come into contact with beer sample. Continue flaming until surface is dry.

Let beer flow through sampling port long enough to cool the previously heated surfaces.

Collect sample in a sterile flask, using aseptic technique for removal of flask closure and its replacement (Note 1).

Where a diaphragm port has been installed, pierce sterilized diaphragm with a sterile needle and let beer flow through it into sterilized sample flask (Note 2).

Notes

1. Sample flasks should be large enough to hold sample required without overfilling the flask or bringing the liquid (or foam) up into the neck of the flask. A sample flask of ample size also makes it easier to mix the contents of the flask thoroughly just before plating or making other tests.

2. The external surface of the diaphragm must be sterile before inserting sampling needle. Precautions must be taken to be sure that the pad covering the diaphragm is in full contact with it and that it contains sufficient alcohol or another antiseptic to keep the outer surface of the diaphragm moist and sterile.

Reference

1. American Society of Brewing Chemists. Report of Subcommittee on Microbiological Controls. Proc. 1966, p. 255.