

Vinegar Fermentation Units

Frings



Fig. 1: The FRINGS Acetator®

Advantages:

- ✓ Production involves only biological steps
- ✓ High automation standard provides for easy handling and low maintenance costs
- ✓ Existing vinegar plants can be retrofitted to enhance productivity
- ✓ All types of vinegar (spirit, wine, fruit) can be produced in the Acetators®
- ✓ Since 1953 more than 1,000 Acetators® successfully installed

Fermentation Technology

Process Description

The raw material for all vinegar fermentations must contain alcohol, e.g. red wine, cider or spirits. Acetobacter spec., with the aid of specially designed FRINGS nutrients, converts the alcohol into acetic acid.

To obtain a stable end product, the bacteria have then to be removed, e.g. by a FRINGS cross flow filtration.

You have the choice between vinegar fermentation units that follow various specific processes, based either on a mash (mash with nutrients) or on the separate addition of alcohol, water and nutrients.

Figure 2 below shows a simplified overview of the FRINGS standard process for the production of vinegar. For this process, the Acetator® (shown in Figure 1) is charged with a mash consisting of alcohol, water and nutrients / nutritive salts.

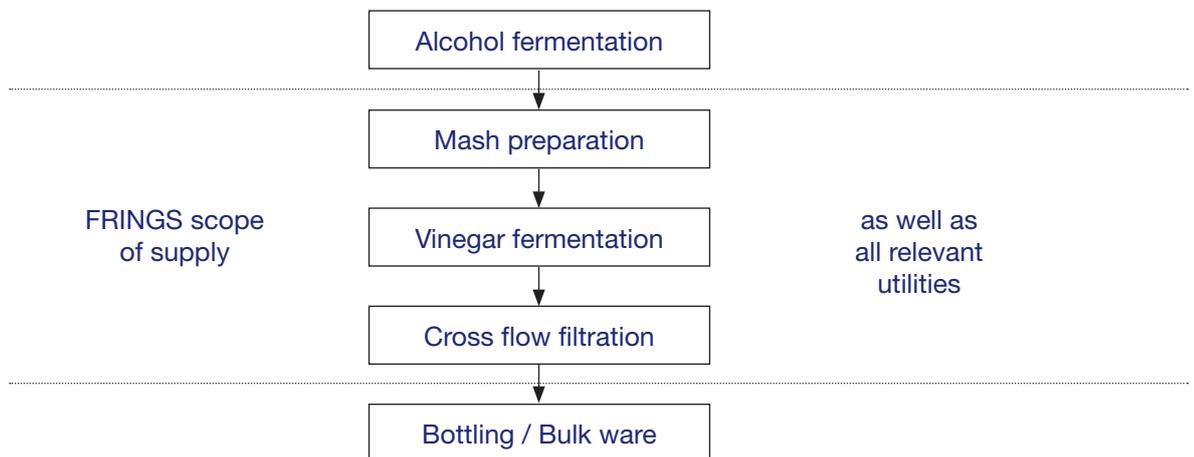


Fig. 2: Block diagram of the steps of vinegar production according to the FRINGS standard process (as opposed to other, more complex FRINGS processes)

FRINGS scope of supply

FRINGS is your solution provider for all necessary components regarding the fermentative production and subsequent clearing of your vinegar. We supply the core technology and all relevant subsidiary aggregates, from emergency backup generators to exhaust air scrubbers. We assist you in starting up or in retrofitting your vinegar production, providing

- ✓ machinery
- ✓ equipment and
- ✓ installation services for your plant

and taking care of your bacteria's needs with

- ✓ special nutrients,
- ✓ laboratory services and
- ✓ consulting by our team of specialists.

Let us invite you into our fascinating world of Fermentation!