New Technology of Liquor Making from Sweet Sorghum Juice

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Sweet sorghum juice as the main raw fermentation material were used to brew a kind of Luzhou-flavor liquor. Major steps were shown in Fig. 1.

![Flow chart of liquor production](image)

The sweet sorghum juice were put into 16 m³ stainless steel fermentation tank. The Brix was controlled between 15 and 20%, pH between 4.5 and 5.5. Sweet sorghum juice were sterilized. Inoculums concentration of yeast and other microorganism were 10%. Appropriate fermentation time is 30 to 50 d. The whole fermentation was divided into two steps, the main fermentation period was 48 h, temperature was controlled between 25 and 30 °C. The other fermentation period calls later fermentation which temperature was controlled between 20 and 22 °C.

When the fermentation was finished, fermented liquors were distilled by the stainless steel distillation system. Temperature of distillation was controlled between 65 and 96°C, and the distillation temperature was gradually increased with the increasing of ethanol concentration in the distillate. Distillation temperature was maintained at 96 °C constantly when the ethanol concentration was about 10%, The temperature of flow of liquor was controlled at about 30 °C.

![Storage tank of base liquor](image)  ![Two kinds of finished liquor](image)

It is necessary that the second and third distillation because of low alcohol concentration after the first distillation. We discarded about 10～25 kg liquor at the beginning of third distillation. When alcohol concentration was about 10%, we stop collecting liquor. And then, we begin another distillation. The liquor alcohol concentration about 63% which were collected in the middle of distillation, we put them into tank to store (Fig. 2) or blend in finished liquor (Fig. 3).

References