



# Secrets behind the Honkaku Shochu and Awamori Aromas

*Kusu*, a vintage Awamori, has a sweet vanilla-like scent, which is also found with whiskey, and especially bourbon that is stored in charred barrels. This scent is derived from vanillin, which is generated when certain properties in the barrel undergo thermal decomposition. However, vanillin is also found in *Kusu*, which is stored in urns. The reason for this is the black *koji* fungus used for the production of Awamori. Starches in rice are protected by hard cell walls mainly composed of cellulose, hemicellulose, pectins and lignin. Black *koji* fungus not only produces the enzymes that break down starches, but also those that break down cell walls. Due to the activity of these enzymes, ferulic acid detaches from hemicellulose, transforms into 4-vinylguaiacol (smoky aroma, like that of Weizen beer made with flour) because of the other enzymes and yeast produced by black *koji* fungus and the heat at distillation, and undergoes chemical reaction during maturing, which results in sweet-smelling vanillin.

*Imo* Shochu has a distinctive sweet potato aroma derived from monoterpene alcohol, which binds with glucose to form aglycone in sweet potatoes, and is also contained in citrus fruits and flowers often used in aroma therapy. In the making of *Imo* Shochu, the sweet potatoes are first steamed, but the aglycone does not decompose and is brought intact into the *moromi* mush. In the *moromi*, the aglycone gets broken down due to the enzymes in the Honkaku Shochu *koji* fungus, and the monoterpene alcohol is detached. The structure changes through the distillation process because of the yeast and the acidic conditions, which then results in the creation of a distinctive aroma. Aglycone is contained more in the skin and the tip of sweet potatoes, so the aroma varies depending on how they are prepared, as well as the variety of sweet potato. It is also affected by how active the enzymes are, and some believe black *koji* fungus has a greater impact on this than the white variety.

