

PROCESS FOR PRODUCING ALKYL NITRITE

ABSTRACT OF THE DISCLOSURE

An alkyl nitrite can be produced on an industrial scale with a high efficiency and with a low yield of by-products by the process wherein nitrogen oxide-containing feed gas is brought into an alkyl alcohol liquid in a distillation column reactor while circulating a liquid fraction, produced in the reactor and containing the alkyl alcohol, through a circulation path including a lower section of the reactor and a cooler to remove the reaction heat vigorously generated in the reactor, and while controlling the weight ratio of the circulating liquid fraction to the total alkyl alcohol fed into the reactor to 50:1 to 200:1, the molar ratio of the total alkyl alcohol fed to the reactor and contained in the circulating liquid fraction to nitrogen oxide in the feed gas to 20:1 to 150:1, and the content of the alkyl alcohol in the liquid fraction to 15 to 60% by weight; and the resultant gas fraction containing the target alkyl nitrite is collected from the reactor.

(Figure 1)