

ABSTRACT
PROCESS FOR PURIFYING CARBON DIOXIDE-CONTAINING GAS
STREAMS

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A process for removing at least one compound selected from acetic acid, acetate esters and aldehydes from a gaseous fraction comprising carbon dioxide and such compounds. The process comprises the steps of (a) scrubbing in a scrubber at least part of the gaseous fraction to remove the acetic acid, acetate esters and/or aldehydes and (b)
10 removing carbon dioxide from the scrubbed product of step (a) by absorption in aqueous potassium carbonate and wherein in step (a) the gaseous fraction is scrubbed with water and acetic acid. The process may be used to remove acetate esters such as vinyl acetate and ethyl acetate and aldehydes such as acetaldehyde.

The process may be used in (i) the manufacture of vinyl acetate by the reaction
15 of ethylene, acetic acid and an oxygen-containing gas in the presence of a catalyst or (ii) in the catalytic oxidation of (a) ethane and/or (b) ethylene to produce respectively (a) acetic acid and/or ethylene and (b) acetic acid.

Fig. 1