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(54) Title: A MIXED OXIDE CATALYST AND A PROCESS FOR THE PRODUCTION OF ETHYLENICALLY UNSATURATED CARBOXYLIC ACIDS OR ESTERS

(57) Abstract: The invention relates to a catalyst for the reaction of formaldehyde or a suitable source thereof with a carboxylic acid or ester to produce an ethylenically unsaturated carboxylic acid or ester. The catalyst comprises a metal oxide having at least two types of metal cations, M¹ and M². M¹ is at least one metal selected from group 3 or 4 in the 4th to 6th periods of the periodic table, group 13 in the 3rd to 5th periods of the periodic table, or the remaining elements in the lanthanide series and M² is at least one metal selected from group 5 in the 5th or 6th periods of the periodic table or group 15 in the 4th or 5th periods of the periodic table. The invention extends to a process to produce an ethylenically unsaturated carboxylic acid or ester.



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