

**Process for manufacturing gamma-butyrolactone
and its use**

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Abstract:

A process for manufacturing gamma-butyrolactone by the catalytic hydrogenation of maleic anhydride, succinic anhydride or their acids in the vapor phase in the presence of catalysts based on copper oxide and aluminum oxide in reduced form is described, which is characterized in that a catalyst is employed to conduct the reaction which is formed on the basis of 50 to 95% by weight copper oxide, 3 to 30% by weight aluminum oxide and 0 to 25% by weight of a binder. Preferably the catalyst is formed on the basis of 83.5 to 85.5% by weight copper oxide, 9 to 11% by weight aluminum oxide, and 4.5 to 6.5% by weight graphite. The reaction mixture obtained can be used directly without separating off the water, e.g. for manufacturing N-methylpyrrolidone.