CLAIMS

1. A method for producing a dialkyl carbonate by reacting at least one of urea and alkyl carbamate with an aliphatic alcohol in the presence of a catalyst, the method comprising:

a gas introduction step in which a gas for expelling ammonia generated by the reaction is introduced into a reactor in which the reaction is being conducted; and

a discharge step in which the ammonia generated in the reactor and the introduced gas are simultaneously discharged,

wherein the dialkyl carbonate has an alkyl group having 2 to 4 carbon atoms,

the reaction being conducted so that the gas introduction step satisfies formula (1) below:

$$52.0<((A+B)\times 22400+L\times M/17.03\times 22400)/L<91.0 \quad \ldots (1)$$

wherein A, B, L and M are as defined below:

A: an amount of decrease in urea per unit time [mol/min]

B: an amount of increase in the dialkyl carbonate per unit time [mol/min]

L: an amount of the aliphatic alcohol contained in a liquid condensed in a condenser tube and refluxed to the reactor per unit time [g/min]

M: the solubility of ammonia in the aliphatic alcohol (ROH) at a condenser tube temperature and under a pressure condition at the time of conducting the reaction [NH_3-g/ROH-g]

2. The method according to claim 1, wherein the gas contains 21% or less of oxygen.

3. The method according to claim 1, wherein the gas is an inert gas.

4. The method according to claim 3, wherein the inert gas is nitrogen or argon.

5. The method according to any one of claims 1 to 4, wherein: as the reactor, a multistage reactor in which two or more reactors are arranged in series is used; the gas is introduced into each of the reactors; and the generated ammonia and the introduced gas are simultaneously discharged.