WHAT IS CLAIMED IS:

1. An apparatus for manufacturing a nitrogen-concentrated liquid fertilizer comprising:

a reaction tank 100 heating livestock manure accommodated therein under reduced pressure to extract vapor containing a nitrogen active ingredient;

a cooling part 200 condensing the vapor containing the nitrogen active ingredient extracted in the reaction tank 100 to discharge a condensate;

a recovery tank 300 recovering the condensate discharged from the cooling part 200; and

a control part 150 controlling a temperature and pressure of the reaction tank 100,

wherein the reaction tank 100 includes a bubble filtration part 130 disposed at a central portion thereof to remove bubbles of the livestock manure generated at the time of heating the livestock manure under the reduced pressure,

wherein the bubble filtration 130 part including a bubble filter 131 convexly protruding downwardly along a central axis k of the reaction tank 100 and a cylindrical-shape bubble overflow prevention vessel 132 disposed to be spaced apart from the bubble filter 131, and

wherein the bubble overflow prevention vessel 132 including a plurality of opening parts h provided at a

lower end of a circumferential surface thereof and the nitrogen active ingredient introduced into the opening parts h being transferred to the cooling part 200.

2. The apparatus for manufacturing a nitrogen-concentrated liquid fertilizer of claim 1, wherein the control part 150 independently controls a temperature and pressure of each of the reaction tank 100 and the cooling part 200 so as to satisfy the following Correlation Equations 1 and 2:

[Correlation Equation 1]

$30\ ℃ \leq \Delta T \leq 80\ ℃$

(here, $\Delta T = T2-T1$, T2 is an internal temperature of the reaction tank 100, and T1 is an internal temperature of the cooling part 200)

[Correlation Equation 2]

$0.3\ \text{bar} \leq P \leq 0.8\ \text{bar}$

(here, P is a pressure of each of the reaction tank 100 and the cooling part 200).

3. A manufacturing method of a nitrogen-concentrated liquid fertilizer using the apparatus for manufacturing a nitrogen-concentrated liquid fertilizer of claim 1, the manufacturing method comprising:

a) controlling the temperature and pressure of the reaction tank 100 to heat the livestock manure under the

reduced pressure; and

b) removing bubbles generated in step a) to extract only the vapor containing the nitrogen active ingredient.

4. The manufacturing method of claim 3, wherein the temperature and pressure satisfy the following Correlation Equations 1 and 2:

[Correlation Equation 1]

$30\ ℃ \leq \Delta T \leq 80\ ℃$

(here, $\Delta T = T2-T1$, T2 is an internal temperature of the reaction tank 100, and T1 is an internal temperature of the cooling part 200)

[Correlation Equation 2]

$0.3\ \text{bar} \leq P \leq 0.8\ \text{bar}$

(here, P is a pressure of each of the reaction tank 100 and the cooling part 200).