CLAIMS

1. A humidity control apparatus, comprising:

an adsorption section (51, 52) having an adsorbent (57) that adsorbs a target substance; and

a generation section (56) configured to generate water on a surface of the adsorbent (57),

the adsorbent (57) having a property of making the water on the surface acidic or alkaline,

the humidity control apparatus being configured to supply air having passed through the adsorption section (51, 52) to an indoor space, to adjust humidity of air in the indoor space,

the generation section including a cooling portion (56) configured to cool air so as to generate condensation water,

the adsorption section (51, 52) including a heat exchanger (56) having the adsorbent (57),

the cooling portion being the heat exchanger (56) that is connected to a refrigerant circuit (50) configured to perform a vapor compression refrigeration cycle and functions as an evaporator,

with an evaporation temperature of the heat exchanger (56) being controlled so that a temperature of air flowing through the heat exchanger (56) is lower than or equal to a dew point temperature.

2. The humidity control apparatus of claim 1, further comprising:

a control device (95) configured to cause a first action in which the heat exchanger (56) functions as an evaporator and a second action in which the heat exchanger (56) functions

as a radiator to occur alternately, wherein

the heat exchanger (56) cools the air in the first action so as to generate the condensation water.

3. The humidity control apparatus of claim 1 or 2, wherein

the adsorbent (57) has a property of making the water on the surface acidic with a Lewis acid.

4. The humidity control apparatus of claim 1 or 2, wherein

the adsorbent (57) includes a metal organic framework.

5. The humidity control apparatus of claim 1 or 2, wherein

the adsorbent (57) includes silica gel.

6. The humidity control apparatus of claim 1 or 2, wherein

the adsorbent (57) includes sodium polyacrylate.

7. The humidity control apparatus of claim 1 or 2, wherein

the adsorbent (57) has a property of making the water on the surface have a pH of 5 or less or 9 or more.

8. The humidity control apparatus of claim 7, wherein

the adsorbent (57) has a property of making the water on the surface have a pH of a range between 2 and 4.

9. The humidity control apparatus of claim 7, wherein

the adsorbent (57) has a property of making the water on the surface have a pH of less than 2.