[Claims]

[Claim 1]

A method for absorbing an element belonging to periods 4 to 6 and groups 3 to 14 of the periodic table, the method comprising:

preparing mesoporous alumina satisfying both of the following items (2) and (3):

(2) a CO_2 amount desorbed at a peak with a peak temperature of less than 200°C in thermal desorption amount spectrometry using CO_2 as a probe molecule is 5 μmol/g or more; and

(3) a NH_3 content desorbed at a peak with a peak temperature of less than 300°C in thermal desorption amount spectrometry using NH_3 as a probe molecule is 25 μmol/g or more and less than 300 μmol/g; and

bringing a liquid comprising an absorption target element in contact with the mesoporous alumina to absorb the absorption target element in the mesoporous alumina;

wherein the absorption target element is at least one type selected from the group consisting of elements belonging to periods 4 to 6 and groups 3 to 14 of the periodic table, and

the liquid comprising the absorption target element has a pH of 2 to 6.

[Claim 2]

The method according to claim 1, wherein the mesoporous alumina has a specific surface area of 100 m^2/g or more.

[Claim 3]

The method according to claim 1 or 2, wherein the mesoporous alumina has a mean pore size of 2 nm or more to 30 nm or less.

[Claim 4]

The method according to any one of claims 1 to 3, wherein the mesoporous alumina has a surface hydroxyl content of 3.5 mmol/g or more.

[Claim 5]

Use of mesoporous alumina for absorbing an element contained in a liquid, wherein the element belongs to periods 4 to 6 and groups 3 to 14 of the periodic table, the mesoporous alumina satisfying both of the following items (2) and (3):

(2) a CO_2 amount desorbed at a peak with a peak temperature of less than 200°C in thermal desorption amount spectrometry using CO_2 as a probe molecule is 5 μmol/g or more; and

(3) a NH_3 content desorbed at a peak with a peak temperature of less than 300°C in

thermal desorption amount spectrometry using NH_3 as a probe molecule is 25 μmol/g or more and less than 300 μmol/g,

wherein the liquid has a pH of 2 to 6.

[Claim 6]

The use according to claim 5, wherein the mesoporous alumina has a surface hydroxyl content of 3.5 mmol/g or more.