CLAIMS

1. A method for removing a lanthanum compound comprising:

a removal step of removing, from an object to be treated having a lanthanum compound serving as a target to be removed and a non-removal object not serving as the target to be removed, the lanthanum compound by bringing a treatment liquid for lanthanum compound removal into contact with the object to be treated, wherein

the treatment liquid for lanthanum compound removal is an aqueous solution containing an α-hydroxycarboxylic acid salt and having a pH of 5 or more and 10 or less,

wherein a content of the α-hydroxycarboxylic acid salt in the treatment liquid for lanthanum compound removal is 3 mass% or more and 60 mass% or less.

2. The method for removing a lanthanum compound according to claim 1, wherein the α-hydroxycarboxylic acid salt is an α-hydroxycarboxylic acid ammonium salt.

3. The method for removing a lanthanum compound according to claim 1 or 2, wherein the α-hydroxycarboxylic acid is at least one selected from citric acid, tartaric acid, malic acid, lactic acid, and glycolic acid.

4. The method for removing a lanthanum compound according to any one of claims 1 to 3, wherein the non-removal object contains at least one selected from polysilicon, silicon oxide, silicon nitride, aluminum oxide, hafnium oxide, zirconium oxide, and titanium nitride.

5. The method for removing a lanthanum compound according to any one of claims 1 to 4, wherein a ratio of a removal rate of the lanthanum compound to a removal rate of the non-removal object is 10 or more.

6. The method for removing a lanthanum compound according to any one of claims 1 to 5, wherein a fluoride ion concentration in the treatment liquid for lanthanum compound removal is 0.5 mass% or less.

7. The method for removing a lanthanum compound according to any one of claims 1 to 6, wherein a hydrogen peroxide concentration in the treatment liquid for lanthanum compound removal is 5 mass% or less.

8. A treatment liquid for lanthanum compound removal, wherein

the treatment liquid for lanthanum compound removal is used for removing, from an object to be treated having a lanthanum compound serving as a target to be removed and a non-removal object not serving as the target to be

removed, by being brought into contact with the object to be treated, wherein

the treatment liquid for lanthanum compound removal is an aqueous solution containing an α-hydroxycarboxylic acid salt and having a pH of 5 or more and 10 or less, and has a content of the α-hydroxycarboxylic acid salt of 3 mass% or more and 60 mass% or less.

9. The treatment liquid for lanthanum compound removal according to claim 8, wherein the α-hydroxycarboxylic acid salt is an α-hydroxycarboxylic acid ammonium salt.

10. The treatment liquid for lanthanum compound removal according to claim 8 or 9, wherein a fluoride ion concentration is 0.5 mass% or less.

11. The treatment liquid for lanthanum compound removal according to any one of claims 8 to 10, wherein a hydrogen peroxide concentration is 5 mass% or less.