CITATION LIST

Patent Literature

[0003]

Patent Citation 1: JP 2004-168864 A (Page 3)

Patent Citation 2: JP 2018-172306 A (Page 3)

SUMMARY OF DISCLOSURE

Technical Problem

[0004]

However, in Patent Citation 1, since the coating material sprayed to the surface of the article is applied in contact with the surface in a state where the coating material is temporarily fixed by entering fine concavities and convexities on the surface of the article, the coating material is gradually peeled off, and the antibacterial effect is not capable of being sustained for a long period of time. In addition, in the coating material such as Patent Citation 1, it is possible to obtain a certain antibacterial effect, but for example, it is not possible to expect a protection effect against viruses such as influenza.

[0005]

Further, in a case where an antiviral coating material such as Patent Citation 2 is used together with such an antibacterial coating material, there is a concern that the coating materials affect each other, and thus, not only is each effect not capable of being expected, but also the surface of the coating target may be altered. In particular, recently, in accordance with new coronavirus (covid-19) pandemic, it is desirable that various articles to be in contact with people are used as a target, and a superficial layer of the article is reformed such that not only an antibacterial effect but also an antiviral effect can be sustained for a long period of time.

[0006]

The present disclosure has been made by focusing on such problems, and an object thereof is to provide a coating material and a coating method capable of making an antibacterial effect and an antiviral effect of a superficial layer of a coating target compatible for a long period of time.

Solution to Problem

[0006a]

In an aspect, there is provided a coating material, characterized by containing:

a coating agent in which inorganic polysilazane and an alkyl silicate condensate are dissolved in an inert solvent at a total concentration of 50 to 80 mass%, as a base agent;

an inorganic antibacterial agent added to the base agent at a ratio of 0.1 to 5 mass%; and

an inorganic antiviral agent added to the base agent at a ratio of 0.1 to 20 mass%.

[0006b]

In another aspect, there is provided a coating method, characterized by comprising

a coating step of coating a surface of a coating target with a coating material containing a coating agent in which inorganic polysilazane and an alkyl silicate condensate are dissolved in an inert solvent at a total concentration of 50 to 80 mass%, as a base agent, an inorganic antibacterial agent added to the base agent at a ratio of 0.1 to 5 mass%, and an inorganic antiviral agent added to the base agent at a ratio of 0.1 to 20 mass%.

[0007]

In order to attain the object described above, a coating material according to the present disclosure is a coating material that contains: a coating agent in which

inorganic polysilazane and an alkyl silicate condensate are dissolved in an inert solvent at a total concentration of 50 to 80 mass%, as a base agent; an inorganic antibacterial agent added to the base agent at a ratio of 0.1 to 5 mass%; and an inorganic antiviral agent added to the base agent at a ratio of 0.1 to 20 mass%. According to such a characteristic, a glass coating film formed by the inorganic polysilazane and the alkyl silicate condensate is used as a parent material, and the inorganic antibacterial agent and the inorganic antiviral agent are fixed to a superficial layer of the coating film in a stable state, and thus, an antibacterial effect and an antiviral effect of the coating target coated with the coating material can be compatible for a long period of time.

[0008]

Further, the coating material may be characterized by further containing an organic antibacterial/antiviral agent added to the base agent at a ratio of 0.1 to 10 mass%. According to such a characteristic, both of the antibacterial effect and the antiviral effect of the coating target can be increased.

[0009]

A coating method according to the present disclosure is a coating method that includes a coating step of coating a