CLAIMS

[Claim 1]

A layered body comprising a surface layer containing zirconia containing at least one stabilizing element and a composition-gradient layer composed of two or more unit layers,

the unit layers each containing at least one coloring element and zirconia containing at least one stabilizing element, and

the composition-gradient layer being constructed as a result of the unit layers being stacked in such a manner that an amount of the stabilizing element in the zirconia containing at least one stabilizing element contained in the composition-gradient layer remains unchanged or decreases from the surface layer toward a surface of the layered body opposite the surface layer, wherein:

an amount of the stabilizing element in the zirconia containing at least one stabilizing element contained in the surface layer is smaller than an amount of the stabilizing element in the zirconia containing at least one stabilizing element contained in a first composition-gradient layer, which is one of the unit layers constituting the composition-gradient layer and is adjacent to the surface layer,

the amount of the stabilizing element in the zirconia

containing the stabilizing element contained in the surface layer is 2.5 mol% or more and 6.0 mol% or less, and

the difference between the stabilizing element content of the surface layer and the stabilizing element content of the first composition-gradient layer is more than 0 mol% and 2.5 mol% or less.

[Claim 2]

The layered body according to Claim 1, wherein the surface layer further contains at least one coloring element.

[Claim 3]

The layered body according to Claim 1 or 2, wherein the difference between the stabilizing element content of the surface layer and the stabilizing element content of the first composition-gradient layer is more than 0 mol% and 1.5 mol% or less.

[Claim 4]

The layered body according to any one of Claims 1 to 3, wherein a difference between a stabilizing element content of the surface layer and a stabilizing element content of the first composition-gradient layer is 0.2 mol% or more.

[Claim 5]

The layered body according to any one of Claims 1 to 4, wherein the amount of the stabilizing element in the zirconia containing at least one stabilizing element contained in the first composition-gradient layer is 2.5 mol% or more and 6.0 mol% or less.

[Claim 6]

The layered body according to any one of Claims 1 to 5, wherein the stabilizing element is one or more selected from the group of yttrium (Y), calcium (Ca), magnesium (Mg), cerium (Ce), praseodymium (Pr), neodymium (Nd), terbium (Tb), erbium (Er) and ytterbium (Yb).

[Claim 7]

The layered body according to any one of Claims 1 to 6, wherein the coloring element is at least one transition metal element, at least one lanthanoid-series rare earth element or both.

[Claim 8]

The layered body according to any one of Claims 1 to 7, wherein an amount of the coloring element is 0.01% by mass or more and 1.0% by mass or less.

[Claim 9]

The layered body according to any one of Claims 1 to 8, wherein warpage as measured using thickness gauges conforming to JIS B 7524: 2008 is 1.0 mm or less.

[Claim 10]

The layered body according to any one of Claims 1 to 9, wherein the layered body is a sintered body.

[Claim 11]

The layered body according to Claim 10, wherein three-point flexural strength of the surface layer as measured by a method according to JIS R 1601 is 700 MPa or more.

[Claim 12]

The layered body according to any one of Claims 1 to 9, wherein the layered body is a calcined body.

[Claim 13]

A method for manufacturing the layered body according to any one of Claims 1 to 11, the method comprising a step of sintering a green body at 1200°C or above and 1600°C or below,

the green body having a surface powder composition layer containing zirconia containing at least one

stabilizing element and a composition-gradient powder composition layer composed of two or more unit powder composition layers,

the unit powder composition layers each containing at least one coloring element and zirconia containing at least one stabilizing element,

the composition-gradient powder composition layer being constructed as a result of the unit powder composition layers being stacked in such a manner that an amount of the stabilizing element in the zirconia containing at least one stabilizing element contained in the composition-gradient powder composition layer remains unchanged or decreases from the surface powder composition layer toward a surface powder composition of the green body opposite the surface powder composition layer, and

an amount of the stabilizing element in the zirconia containing at least one stabilizing element contained in the surface powder composition layer being smaller than an amount of the stabilizing element in the zirconia containing at least one stabilizing element contained in a first composition-gradient powder composition layer, which is one of the unit powder composition layers constituting the composition-gradient powder composition layer and is adjacent to the surface powder composition layer,

the stabilizing element content in the zirconia

containing the stabilizing element contained in the surface powder composition layer is 2.5 mol% or more and 6.0 mol% or less, and

the difference between the stabilizing element content in the surface powder composition layer and the stabilizing element content in the first composition-gradient powder composition layer is more than 0 mol% and 2.5 mol% or less.

[Claim 14]

A method for manufacturing the layered body according to any one of Claims 1 to 11, the method comprising a step of calcining a green body at 800°C or above and below 1200°C to turn the green body into a calcined body and

a step of sintering the calcined body at 1200°C or above and 1600°C or below,

the green body having a surface powder composition layer containing zirconia containing at least one stabilizing element and a composition-gradient powder composition layer composed of two or more unit powder composition layers,

the unit powder composition layers each containing at least one coloring element and zirconia containing at least one stabilizing element,

the composition-gradient powder composition layer being constructed as a result of the unit powder composition

layers being stacked in such a manner that an amount of the stabilizing element in the zirconia containing at least one stabilizing element contained in the composition-gradient powder composition layer remains unchanged or decreases from the surface powder composition layer toward a surface powder composition of the green body opposite the surface powder composition layer, and

an amount of the stabilizing element in the zirconia containing at least one stabilizing element contained in the surface powder composition layer being smaller than an amount of the stabilizing element in the zirconia containing at least one stabilizing element contained in a first composition-gradient powder composition layer, which is one of the unit powder composition layers constituting the composition-gradient powder composition layer and is adjacent to the surface powder composition layer,

the stabilizing element content in the zirconia containing the stabilizing element contained in the surface powder composition layer is 2.5 mol% or more and 6.0 mol% or less, and

the difference between the stabilizing element content in the surface powder composition layer and the stabilizing element content in the first composition-gradient powder composition layer is more than 0 mol% and 2.5 mol% or less.

[Claim 15]

A method for manufacturing the layered body according to any one of Claims 1 to 9 or 12, the method comprising a step of calcining a green body at 800°C or above and below 1200°C,

the green body having a surface powder composition layer containing zirconia containing at least one stabilizing element and a composition-gradient powder composition layer composed of two or more unit powder composition layers,

the unit powder composition layers each containing at least one coloring element and zirconia containing at least one stabilizing element,

the composition-gradient powder composition layer being constructed as a result of the unit powder composition layers being stacked in such a manner that an amount of the stabilizing element in the zirconia containing at least one stabilizing element contained in the composition-gradient powder composition layer remains unchanged or decreases from the surface powder composition layer toward a surface powder composition of the green body opposite the surface powder composition layer, and

an amount of the stabilizing element in the zirconia containing at least one stabilizing element contained in the surface powder composition layer being smaller than an

amount of the stabilizing element in the zirconia containing at least one stabilizing element contained in a first composition-gradient powder composition layer, which is one of the unit powder composition layers constituting the composition-gradient powder composition layer and is adjacent to the surface powder composition layer,

the stabilizing element content in the zirconia containing the stabilizing element contained in the surface powder composition layer is 2.5 mol% or more and 6.0 mol% or less, and

the difference between the stabilizing element content in the surface powder composition layer and the stabilizing element content in the first composition-gradient powder composition layer is more than 0 mol% and 2.5 mol% or less.

[Claim 16]

The manufacturing method according to any one of Claims 13 to 15, wherein the surface powder composition layer further contains at least one coloring element.

[Claim 17]

The manufacturing method according to any one of Claims 13 to 16, wherein powder compositions contained in the powder composition layers are powders in a granulated state.

[Claim 18]

A dental material comprising the layered body according to any one of Claims 1 to 12.