part of the outlet unit, and stores the contents therein.

Furthermore, this tubular container has the following characteristics. The outlet unit comprises at least an innermost layer formed from a non-absorbing resin, an intermediate layer including a gas barrier layer, and an outermost layer. At least the surfaces of the outlet unit that comes into contact with the contents are formed from a non-absorbing resin. In the body part, a first surface side of one side edge of the laminated film is overlapped and welded to a second surface side of the other side edge. One end of the body part in an axial direction is welded to an outer peripheral surface of the shoulder part. On the other end of the body part in the axial direction, inner surfaces are aligned and welded together, or at least the surfaces that come into contact with the contents are welded to a lid member made of a non-absorbing resin. The laminated film comprises at least an innermost layer formed from a non-absorbing resin on an inner side that comes into contact with the contents, an outermost layer formed from a non-absorbing resin on an outermost side, and an intermediate layer formed between the innermost layer and the outermost layer and including a gas barrier layer. The non-absorbing resin of the innermost layer of the outlet unit, the non-absorbing resin of the outermost layer of the outlet unit, the non-absorbing resin of the innermost layer of the laminated film, and the non-absorbing resin of the outermost layer of the laminated film, are each a polyester-based resin or a cyclic polyolefin-based resin.

[0013]

According to an embodiment, when the outlet unit, the body part, and the lid member are provided, the surfaces that come into contact with the contents along with the lid member are each formed from a non-absorbing resin. Thus, it is possible to form these from different materials and thus increase the degree of freedom of material selection. Further, the innermost layer and the outermost layer of the laminated film that constitutes the body part are formed from a non-absorbing resin, and the intermediate layer comprises a gas barrier layer. This makes it possible to provide a tubular container having non-absorbing properties with respect to the contents as well as gas barrier properties. As a result, the tubular container according to the present invention is capable of smoothly dispensing the contents and preventing a decrease in flavor, efficacy, and the like of the contents.

[0014]

In the tubular container according to an embodiment, the outlet unit is formed from a non-absorbing resin. According to this invention, it is possible to achieve an outlet unit having non-absorbing properties, and provide a tubular container that comprises the outlet unit and has non-absorbing properties.

[0015]

In the tubular container according to an embodiment, the outlet unit comprises at least the innermost layer formed from a non-absorbing resin, the intermediate layer including a gas barrier layer, and the outermost layer formed from a non-absorbing resin. According to this invention, it is possible to achieve an outlet unit having non-absorbing properties and gas barrier properties, and provide a tubular container that comprises the outlet unit and has non-absorbing properties as well as gas barrier properties.

[0016]

In the tubular container according to an embodiment, the gas barrier layer is made of

a metal foil, a metal deposited film, or an inorganic vapor-deposited film. According to this invention, it is possible to achieve a body part having non-absorbing properties with respect to the contents as well as gas barrier properties. As a result, a tubular container that prevents a decrease in the flavor, efficacy, and the like of the contents can be provided.
[0017]

In the tubular container according to the present invention, the laminated film comprises one type or two or more types of resin layers selected from a polyolefin, an adhesive resin, and a thermoplastic elastomer. According to this invention, the body part is formed from the laminated film comprising such a resin layer, and thus the body part is flexible, making it possible to improve the squeezability that allows the contents to be pushed out and dispensed.
[0018]

(2) A tubular container according to a second aspect of the present disclosure is a tubular container that has non-absorbing properties with respect to contents as well as gas barrier properties, and allows the contents to be visually checked from outside the tubular container. That is, this tubular container comprises at least an outlet unit that includes an outlet part through which the contents are dispensed and a shoulder part that extends radially outward from the outlet part; and a body part that is welded to the shoulder part of the outlet unit, and stores the contents therein. The outlet unit comprises at least an innermost layer formed from a non-absorbing resin, an intermediate layer including a gas barrier layer, and an outermost layer formed from a non-absorbing resin.Furthermore, the body part is a transparent body part comprising at least an innermost layer formed from a non-absorbing resin on an inner side that comes into contact with the contents, an outermost layer formed on an outermost side, and an intermediate layer formed between the innermost layer and the outermost layer and including a gas barrier layer. The non-absorbing resin of the innermost layer of the outlet unit, the non-absorbing resin of the outermost layer of the outlet unit, the non-absorbing resin of the innermost layer of the transparent body part, and the non-absorbing resin of the outermost layer of the transparent body part, are each a polyester-based resin or a cyclic polyolefin-based resin.
[0019]

According to an embodiment, a transparent body part that comprises a gas barrier layer is formed, allowing the contents to be checked from outside the tubular container and imparting gas barrier properties. As a result, the residual amount and the like of the contents can be visually checked, and a decrease in the flavor, efficacy, and the like of the contents can be suppressed. Further, the innermost layer of the body part is formed from a non-absorbing resin, making it possible to suppress the absorption of the active ingredients and the like of the contents to the tubular container. Note that the body part can be formed into a cylindrical shape by extrusion molding or by overlapping the side edges of a laminated film having a rectangular shape, making it possible to provide a tubular container having various forms.
[0020]

In the tubular container according to an embodiment, one end of the body part in the axial direction is welded to the outer peripheral surface of the shoulder part. On the other end of the body part in the axial direction, the inner surfaces are aligned and welded together or welded to the lid member. According to this invention, as long as the material of the shoulder part of the outlet unit and the material of the innermost layer of the body part to be welded to the shoulder part are the same, the materials used for the layers of the body part other than the innermost layer can be materials different from that of the outlet unit. Further, even when the body part and the lid member are welded at the other end of the body part in the axial direction, as long as the material of the lid member and the material of the innermost layer or the

outermost layer of the body part to be welded to the lid member are the same, the materials used for other layers of the body part can be materials different from the material of the lid member. As a result, a tubular container having various forms can be provided.

[0021]

In the tubular container according to an embodiment, at least the surfaces

What is claimed is:

1. A tubular container comprising at least:

an outlet unit provided with an outlet part through which the contents are dispensed and a shoulder part that extends radially outward from the outlet part; and a body part that is made of a laminated film, is welded to the shoulder part of the outlet unit, and stores the contents therein, wherein:

the outlet unit comprises at least an innermost layer formed from a non-absorbing resin, an intermediate layer including a gas barrier layer, and an outermost layer formed from a non-absorbing resin;

the body part is obtained by overlapping and welding a first surface side of one side edge of the laminated film to a second surface side of the other side edge, welding one end of the body part in an axial direction to an outer peripheral surface of the shoulder part, and aligning and welding inner surfaces of the other end of the body part in the axial direction together or welding at least surfaces that come into contact with the contents to a lid member made of a non-absorbing resin; and

the laminated film comprises at least an innermost layer formed from a non-absorbing resin on an inner side that comes into contact with the contents, an outermost layer formed from a non-absorbing resin on an outermost side, and an intermediate layer formed between the innermost layer and the outermost layer and including a gas barrier layer; and

the non-absorbing resin of the innermost layer of the outlet unit, the non-absorbing resin of the outermost layer of the outlet unit, the non-absorbing resin of the innermost layer of the laminated film, and the non-absorbing resin of the outermost layer of the laminated film, are each a polyester-based resin or a cyclic polyolefin-based resin.

2. The tubular container according to claim 1, wherein the non-absorbing resin of the innermost layer of the outlet unit, the non-absorbing resin of the outermost layer of the outlet unit, the non-absorbing resin of the innermost layer of the laminated film, and the non-absorbing resin of the outermost layer of the laminated film, are each an isophthalic acid-modified polyethylene terephthalate resin, a cyclic olefin polymer, or a cyclic olefin copolymer.

3. The tubular container according to claim 1 or 2 , wherein

the non-absorbing resin of the innermost layer of the outlet unit, the non-absorbing resin of the outermost layer of the outlet unit, the non-absorbing resin of the innermost layer of the laminated film, and the non-absorbing resin of the outermost layer of the laminated film, are formed from the same non-absorbing resin. .

4. The tubular container according to any one of claims 1 to 3, wherein

the intermediate layer of the outlet unit comprises at least one of: (a) one type or two or more types of resin selected from an ethylene-vinyl alcohol copolymer resin, a polyvinyl alcohol resin, a polyamide resin, and a polyvinylidene chloride resin, (b) a metal foil or a metal deposited film, or (c) an inorganic vapor-deposited film, and the gas barrier layer of the intermediate layer of the body part is made of a metal foil, a metal deposited film, or an inorganic vapor-deposited film.

5. The tubular container according to any one of claims 1 to 4, wherein

the laminated film comprises one type or two or more types of a resin layer selected from a polyolefin, an adhesive resin, and a thermoplastic elastomer.

6. A tubular container comprising at least:

an outlet unit provided with an outlet part through which the contents are dispensed and a shoulder part that extends radially outward from the outlet part; and a body part that is welded to the shoulder part of the outlet unit, and stores the contents therein, wherein: the outlet unit comprises at least an innermost layer formed from a non-absorbing resin, an intermediate layer including a gas barrier layer, and an outermost layer formed from a non-absorbing resin;

the body part is a transparent body part comprising at least an innermost layer formed from a non-absorbing resin on an inner side that comes into contact with the contents, an outermost layer formed on an outermost side, and an intermediate layer formed between the

innermost layer and the outermost layer and including a gas barrier layer; and the non-absorbing resin of the innermost layer of the outlet unit, the non-absorbing resin of the outermost layer of the outlet unit, the non-absorbing resin of the innermost layer of the transparent body part, and the non-absorbing resin of the outermost layer of the transparent body part, are each a polyester-based resin or a cyclic polyolefin-based resin.

7. The tubular container according to claim 6, wherein one end of the body part in an axial direction is welded to an outer peripheral surface of the shoulder part, and inner surfaces of the other end of the body part in the axial direction are aligned and welded together or at least surfaces of the body part that come into contact with the contents are welded to a lid member made of a non-absorbing resin.

8. The tubular container according claim 6, wherein the outlet unit and the body part are integrated by extrusion molding in a layer configuration of the body part, and inner surfaces of the other end of the body part in the axial direction are aligned and welded together or at least surfaces of the body part that come into contact with the contents are welded to a lid member made of a non-absorbing resin.

9. The tubular container according to claim 6, wherein the non-absorbing resin of the innermost layer of the outlet unit, the non-absorbing resin of the outermost layer of the outlet unit, the non-absorbing resin of the innermost layer of the transparent body part,

and the non-absorbing resin of the outermost layer of the transparent body part, are each an isophthalic acid-modified polyethylene terephthalate resin, a cyclic olefin polymer, and a cyclic olefin copolymer.

10. The tubular container according to any one of claims 6 to 9, wherein the gas barrier layer is formed from one type or two or more types of resin selected from an ethylene-vinyl alcohol copolymer resin, a polyvinyl alcohol resin, a polyamide resin, and a polyvinylidene chloride resin, and the intermediate layer of the outlet unit is a transparent deposited layer having gas barrier properties.

11. The tubular container according to any one of claims 6 to 10, wherein the gas barrier layer has oxygen absorbency, or an area between the gas barrier layer and the innermost layer comprises oxygen absorbing layer.

12. The tubular container according to any one of claims 6 to 11, wherein the non-absorbing resin of the innermost layer of the outlet unit, the non-absorbing resin of the outermost layer of the outlet unit, the non-absorbing resin of the innermost layer of the transparent body part, and the non-absorbing resin of the outermost layer of the transparent body part, are formed from the same non-absorbing resin.