# CLAIMS

1. A fluidic device, including:

a base member;

a porous layer provided over the base member;

a flow path wall provided in the porous layer, and

a flow path defined by an inner surface of the flow path wall and the base member,

wherein linearity of the fluidic device is 30% or less, where the linearity is obtained by the following formula:

Linearity (%) = {[A (mm)–B (mm)]/B (mm)}×100, and

wherein a length B is a length of a straight line between arbitrary two points on a contour of the inner surface of the flow path wall, and a length A is a length of a continuous line between said two points.

2. The fluidic device according to claim 1,

wherein the linearity is 15% or less.

3. The fluidic device according to claim 1 or 2,

wherein the flow path wall comprises a thermoplastic material.

4. A fluidic device, comprising:

a flow path enclosed by:

a base member;

a porous layer provided over the base member;

a flow path wall provided in the porous layer; and

a protection layer provided over the porous layer,

wherein the flow path wall and the protection layer are made of a

thermoplastic material and fused with each other.

5. The fluidic device according to any one of claims 1 to 4,

wherein at least a sample addition region, a reaction region, and a detection region are provided in the flow path.

6. The fluidic device according to claim 5,

wherein a protrusion that protrudes above the porous layer is provided along a circumference of an opening defining the sample addition region.

7. The fluidic device according to any one of claims 3 to 6,

wherein the thermoplastic material is at least one selected from the group consisting of fat and oil, and thermoplastic resin.

8. The fluidic device according to any one of claims 3 to 7,

wherein the thermoplastic material has a melting start temperature of from 50°C to 150°C.

9. The fluidic device according to any one of claims 1 to 8,

wherein the flow path is formed by thermal transfer.

10. The fluidic device according to any one of claims 1 to 9,

wherein the porous layer has an average thickness of from 0.01 mm to 0.3 mm.

11. The fluidic device according to any one of claims 1 to 10,

wherein the fluidic device is used as either one of a chemical sensor and a biochemical sensor.

12. A thermal transfer medium for fluidic device fabrication, comprising:

a support member; and

a flow path forming material layer disposed over the support member,

wherein the flow path forming material layer comprises a thermoplastic material that penetrates into a porous member constituting a fluidic device when the flow path forming material layer is thermally transferred to the porous member, and

wherein the flow path forming material layer has a thickness of from 30 μm to 250 μm.

13. The thermal transfer medium for fluidic device fabrication according to claim 12,

wherein the flow path forming material layer has a thickness of from 50 μm to 120 μm.

14. A method for fabricating a fluidic device, comprising:

placing the flow path forming material layer of the thermal transfer medium for fluidic device fabrication according to claim 12 or 13 and the porous member so as to overlap with each other;

applying heat and pressure to the thermal transfer medium for fluidic device fabrication;

transferring the flow path forming material layer to the porous member; and

forming a flow path in the porous member by making the thermoplastic material penetrate into the porous member.

15. A fluidic device, comprising:

a flow path member,

wherein the flow path member is formed by making the

thermoplastic material of the thermal transfer medium for fluidic device fabrication according to claim 12 or 13 penetrate into the porous member.

CLAIMS

1. A fluidic device, comprising:

a base member;

a porous layer provided over the base member;

a flow path wall provided in the porous layer, and

a flow path defined by an inner surface of the flow path wall and the base member,

wherein linearity of the fluidic device is 30% or less, where the linearity is obtained by the following formula :

Linearity (%) = {[A (mm)-B (mm)]/B (mm)} x l00, and

wherein a length B is a length of a straight line between arbitrary two points on a contour of the inner surface of the flow path wall, and a length A is a length of a continuous line measured along the contour between said two points.

2. The fluidic device according to claim 1, wherein the linearity is 15% or less.

3. The fluidic device according to claim 1 or 2, wherein the flow path wall comprises a thermoplastic material.

4. A fluidic device, comprising:

a flow path enclosed by:

a base member;

a porous layer provided over the base member;

a flow path wall provided in the porous layer; and

a protection layer provided over the porous layer,

wherein the flow path wall and the protection layer are made of a thermoplastic material and fused with each other, and

wherein linearity of the fluidic device is 30% or less, where the linearity is obtained by the following formula:

Linearity (%) = {[A (mm)-B (mm)]/B (mm)} x l00, and

wherein a length B is a length of a straight line between arbitrary two points on a contour of the inner surface of the flow path wall, and a length A is a length of a continuous line measured along the contour between said two points.

5. The fluidic device according to any one of claims 1 to 4,

wherein at least a sample addition region, a reaction region, and a detection region are provided in the flow path.

6. The fluidic device according to claim 5,

wherein a protrusion that protrudes above the porous layer is provided along a circumference of an opening defining the sample addition region.

7. The fluidic device according to any one of claims 3 to 6,

wherein the thermoplastic material is at least one selected from the group consisting of fat and oil, and thermoplastic resin.

8. The fluidic device according to any one of claims 3 to 7, wherein the thermoplastic material has a melting start temperature of from 50°C to 150°C.

9. The fluidic device according to any one of claims 1 to 8, wherein the flow path is formed by thermal transfer.

10. The fluidic device according to any one of claims 1 to 9, wherein the porous layer has an average thickness of from 0.01 mm to 0.3 mm.

11. The fluidic device according to any one of claims 1 to 10,

wherein the fluidic device is used as either one of a chemical sensor and a biochemical sensor.

12. A thermal transfer medium for fabricating fluidic device according to any one of claims 1 to 11, comprising:

a support member; and

a flow path forming material layer disposed over the support member,

wherein the flow path forming material layer comprises a thermoplastic material that penetrates into a porous member constituting a fluidic device when the flow path forming material layer is thermally transferred to the porous member, and

wherein the flow path forming material layer has a thickness of from 30 μm to 250 μm.

13. The thermal transfer medium for fluidic device fabrication according to claim 12,

wherein the flow path forming material layer has a thickness of from 50 μm to 120 μm.

14. A method for fabricating a fluidic device, comprising:

placing the flow path forming material layer of the thermal transfer medium for fluidic device fabrication according to claim 12 or 13 and the porous member so as to overlap with each other;

applying heat and pressure to the thermal transfer medium for fluidic device fabrication;

transferring the flow path forming material layer to the porous member; and

forming a flow path in the porous member by making the thermoplastic material penetrate into the porous member.

15. A fluidic device, comprising:

a flow path member,

wherein the flow path member is formed by making the thermoplastic material of the thermal transfer medium for fluidic device fabrication according to claim 12 or 13 penetrate into the porous member.