Claims

[Claim 1] A sheet comprising a nonwoven fabric formed of fiber containing an aliphatic polyester, wherein

the aliphatic polyester contained in the fiber has a molecular weight distribution in which a maximum value exists in at least two or more regions of the molecular weight,

a thickness of the sheet is 30 to 70 μm,

a porosity of the sheet is 60 to 80% and

the sheet has a cell infiltration suppressing action.

[Claim 2] The sheet according to claim 1, wherein a weight of the sheet is 0.5 to 10 mg/cm^2.

[Claim 3] The sheet according to claim 1 or 2, wherein a density of the sheet is 100 to 1000 mg/cm^3.

[Claim 4] The sheet according to any one of claims 1 to 3, wherein the fiber has an average fiber diameter of 300 to 1500 nm.

[Claim 5] The sheet according to any one of claims 1 to 4, wherein at least one of the regions of the molecular weight is a region of a number average molecular weight of 1000 to 7000 before sterilization treatment.

[Claim 6] The sheet according to any one of claims 1 to 5, wherein at least one of the regions of the molecular weight is a region of a number average molecular weight of 40000 to 150000 before sterilization treatment.

[Claim 7] The sheet according to any one of claims 1 to 6, wherein at least one of the regions of the molecular weight is a region of a number average molecular weight of 50000 to 140000 before sterilization treatment.

[Claim 8] The sheet according to any one of claims 1 to 7, wherein the region of the molecular weight is at least two regions of a region of a number average molecular weight of 1000 to 7000 and a region of a number average molecular weight of 40000 to 150000 before sterilization treatment.

[Claim 9] The sheet according to any one of claims 1 to 8, wherein the region of the molecular weight is at least two regions of a region of a number

average molecular weight of 1000 to 7000 and a region of a number average molecular weight of 50000 to 140000 before sterilization treatment.

[Claim 10] The sheet according to any one of claims 1 to 9, wherein, when the aliphatic polyester having a maximum value on a lowest molecular weight side among the aliphatic polyesters contained in the fiber that form the nonwoven fabric is defined as a low molecular weight component, and the aliphatic polyester having a maximum value on a highest molecular weight side among the aliphatic polyesters contained in the fiber that form the nonwoven fabric is defined as a high molecular weight component, a mass ratio of a content of the low molecular weight component to a sum of a content of the low molecular weight component and a content of the high molecular weight component in the nonwoven fabric is 0.01 or more and 0.3 or less.

[Claim 11] The sheet according to any one of claims 1 to 10, wherein, when the aliphatic polyester having a maximum value on a lowest molecular weight side among the aliphatic polyesters contained in the fiber that form the nonwoven fabric is defined as a low molecular weight component and the aliphatic polyester having a maximum value on a highest molecular weight side among the aliphatic polyesters contained in the fiber that form the nonwoven fabric is defined as a high molecular weight component, a mass ratio of a content of the low molecular weight component to a sum of a content of the low molecular weight component and a content of the high molecular weight component in the nonwoven fabric is 0.02 or more and 0.2 or less.

[Claim 12] The sheet according to any one of claims 1 to 11, wherein the aliphatic polyester is biodegradable.

[Claim 13] The sheet according to claim 12, wherein the biodegradable aliphatic polyester is at least one selected from the group consisting of polycaprolactone, polycaprolactone diol, polylactic acid, polyglycolic acid, and copolymers thereof.

[Claim 14] The sheet according to claim 12 or 13, wherein the biodegradable aliphatic polyester is at least one selected from the group consisting of polycaprolactone, polycaprolactone diol, and copolymers thereof.

[Claim 15] The sheet according to any one of claims 1 to 14, wherein the cell is an inflammatory cell.

[Claim 16] The sheet according to any one of claims 1 to 15, wherein the sheet has further a neuroprotective and/or nerve regeneration promoting action.

[Claim 17] The sheet according to claim 16, wherein the neuroprotective and/or nerve regeneration promoting action results from suppression of neural scarring.

[Claim 18] The sheet according to any one of claims 1 to 17, wherein the sheet contains further a drug.

[Claim 19] The sheet according to claim 18, wherein the drug is a therapeutic agent for nerve injury.

[Claim 20] The sheet according to claim 19, wherein the therapeutic agent for nerve injury is vitamin B12.

[Claim 21] The sheet according to claim 20, wherein the vitamin B12 is methylcobalamin.

[Claim 22] The sheet according to claim 20 or 21, wherein a content of the vitamin B12 is 0.005 to 0.5 mg per 1 cm^2 of the sheet.

[Claim 23] The sheet according to claim 20 or 21 above, wherein a content of the vitamin B12 is 0.0075 to 0.4 mg per 1 cm^2 of the sheet.

[Claim 24] The sheet according to any one of claims 1 to 23, wherein the sheet is used by being implanted into a periphery of a nerve injury site in a living body.

[Claim 25] The sheet according to any one of claims 1 to 23, wherein the sheet is used by being wound around a nerve at a nerve injury site in a living body.

[Claim 26] The sheet according to claim 24 or 25, wherein the living body is a human.

[Claim 27] The sheet according to any one of claims 1 to 26, wherein the sheet is subjected to sterilization treatment.

[Claim 28] The sheet according to claim 27, wherein the sterilization treatment is electron beam sterilization or EOG sterilization.

[Claim 29] Use of a nonwoven fabric formed of fiber containing an aliphatic polyester, wherein

the aliphatic polyester contained in the fiber has a molecular weight distribution in which a maximum value exists in at least two or more regions of the molecular weight,

a thickness of the nonwoven fabric is 30 to 70 μm and

a porosity of the nonwoven fabric is 60 to 80%,

in the manufacture of a sheet having a cell infiltration suppressing action.

[Claim 30] The use according to claim 29, wherein the nonwoven fabric contains further a drug.