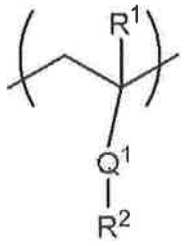
during preparation of the composition for producing a fiber, and can also be performed after a heat treatment after spinning the composition for producing a fiber.

[0022]



(1)

[0023]

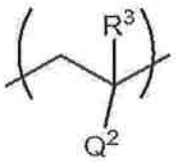
wherein

$R^1$ is a hydrogen atom or a methyl group,

$Q^1$ is an ester bond or an amide bond,

$R^2$ is an alkyl group having 1 - 10 carbon atoms or an aromatic hydrocarbon group having 6 - 10 carbon atoms, ~~which is substituted by~~wherein at least one hydrogen atom is substituted by a hydroxy group.

[0024]



(2)

[0025]

wherein

$R^3$ is a hydrogen atom or a methyl group, and

$Q^2$ is an active ester group.

[0026]

The definition of each group of the formula (1) and the formula (2) is described in detail in the following.

[0027]

$R^1$ is a hydrogen atom or a methyl group.

[0028]

$Q^1$ is an ester bond or an amide bond, and is preferably an ester bond from the aspect of the solubility of the polymer compound of component A in a solvent.

[0029]

[0095]

<Example (Preparation of composition for producing fiber (solution))>

(Example 1)

Polymer compound 1 (0.50 g), 1,3,4,6-tetrakis(methoxymethyl)glycoluril (0.03 g), pyridinium p-toluenesulfonate (0.005 g), dimethylacetamide (0.49 g), and acetone (1.48 g) were mixed, and the mixture was stirred by mix rotor VMR-5 (manufactured by AS ONE Corporation) at 100 rpm until dissolution to give the composition of Example 1 for producing a fiber. The content ratio of polymer compound 1 in the composition of Example 1 for producing a fiber was about 20 wt%.

[0096]

(Example 2)

Polymer compound 2 (0.70 g), 1,3,4,6-tetrakis(methoxymethyl)glycoluril (0.04 g), pyridinium p-toluenesulfonate (0.007 g), dimethylacetamide (0.31 g), and acetone (0.94 g) were mixed, and the mixture was stirred by mix rotor VMR-5 (manufactured by AS ONE Corporation) at 100 rpm until dissolution to give the composition of Example ~~1~~2 for producing a fiber. The content ratio of polymer compound 2 in the composition of Example 2 for producing a fiber was about 35 wt%.

[0097]

(Example 3)

Polymer compound 3 (0.23 g), 1,3,4,6-tetrakis(methoxymethyl)glycoluril (0.01 g), pyridinium p-toluenesulfonate (0.002 g), dimethylacetamide (0.50 g), and acetone (1.52 g) were mixed, and the mixture was stirred by mix rotor VMR-5 (manufactured by AS ONE Corporation) at 100 rpm until dissolution to give the composition of Example 3 for producing a fiber. The content ratio of polymer compound 3 in the composition of Example 3 for producing a fiber was about 10 wt%.

cell proliferation efficiency was calculated by cell number on day 4 of culture/seeded cell number.

[0146]

The results of proliferation efficiency of each cell are shown Table 8 (human ES cell) and Table 9 (human iPS cell) (mean of n=2).

[0147]

[Table 8]

| | human ES cell proliferation efficiency | human ES cell survival rate (%) |
|---|---|---|
| fiber substrate of Example 4 immobilized with laminin 511 | 6.65 | 95.3 |
| fiber substrate of Example 4 | 2.87 | 93.3 |
| fiber substrate of Comparative Example 4 | 0.38 | 90.7 |
| glass substrate coated with Matrigel | 7.20 | 95.1 |

[0148]

[Table 9]

| | human iPS cell proliferation efficiency | human iPS cell survival rate (%) |
|---|---|---|
| fiber substrate of Example 4 immobilized with laminin 511 | 3.87 | 88.0 |
| fiber substrate of Example 4 | 0.10 | 83.3 |
| fiber substrate of Comparative Example 4 | undetectable | undetectable |
| glass substrate coated with Matrigel | 4.18 | 68.8 |

[0149]

From the results of Table 8 and Table 9, it was found that the fiber substrate of Example 4 is effective for the culture of human ES cell and human iPS cell than the fiber substrate of Comparative Example 4. In addition, it was found that the cell proliferation rate •~~BR>~~△ of the fiber substrate of Example 4 immobilized with laminin 511 is of the same level as the cell proliferation rate of the glass substrate coated with Matrigel, from which it was clarified that immobilization