position 1/position 2/position 3/position 4/position 5/positions 6 to 9 = 1.5/22.1/17.2/21.8/13.5/23.9. The ratio (IO-1S)/(IO-2S) is 1.6 (mass ratio).

[0144]

(a-2): sodium internal olefin sulfonate having 16 carbons

The mass ratio of hydroxy form (sodium hydroxyalkane sulfonate)/olefin form (sodium olefin sulfonate) in (a-2) is 85/15. The position-distribution-mass ratio of sulfonate groups of the HAS forms in (a-2) is as follows: position 1/position 2/position 3/position 4/position 5/positions 6 to 8 = 1.5/24.1/19.9/24.6/14.1/15.8. The ratio (IO-1S)/(IO-2S) = 2.3 (mass ratio).

[0145]

(a-3): sodium internal olefin sulfonate having 18 carbons

The mass ratio of hydroxy form (sodium hydroxyalkane sulfonate)/olefin form (sodium olefin sulfonate) in (a-3) is 82/18. The position-distribution-mass ratio of sulfonate groups of the HAS forms in (a-3) is as follows: position 1/position 2/position 3/position 4/position 5/positions 6 to 9 = 1.7/31.5/25.1/24.7/10.2/6.8. The ratio (IO-1S)/(IO-2S) is 4.8 (mass ratio).

[0146]

(a-4): sodium internal olefin sulfonate having 18 carbons

The mass ratio of hydroxy form (sodium hydroxyalkane sulfonate)/olefin form (sodium olefin sulfonate) in (a-4) is 83/17. The position-distribution-mass ratio of sulfonate groups of the HAS forms in (a-4) is as follows:

defined as level 2 to perform the evaluation. In Table 2, the composition of Comparative Example 5 is defined as level 1 and the composition of Example 8 is defined as level 2 to perform the evaluation. In Table 3, the composition of Comparative Example 7 is defined as level 1 and the composition of Example 14 is defined as level 2 to perform the evaluation. The evaluation results are shown in Tables 1, 2 and 3. It can be determined that a textile treatment agent composition with an average score exceeding 0 imparts better smoothness. The higher the average score, the more favorable the textile treatment agent composition.

[0160]

<Method for evaluation of cleaning properties>

(1) Preparation of model artificially sebum-stained cloth

A model artificially sebum-stained cloth was prepared by applying a model artificially sebum-staining liquid of the following composition to a cloth. The application of the model artificially sebum-staining liquid to the cloth was carried out by printing the artificially staining liquid on the cloth using a gravure roll coater. The process for preparing the model artificially sebum-staining cloth by applying the model artificially sebum-staining liquid to the cloth was carried out with a cell capacity of the gravure roll of 58 cm^3/m^2, a coating speed of 1.0 m/min, a drying temperature of 100°C and a drying time of 1 minute.