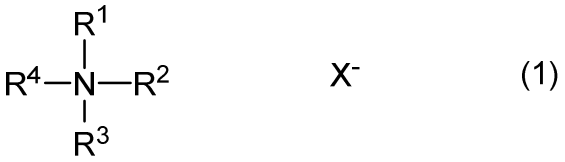
or less, further preferably 5 mass% or less, further preferably 4 mass% or less and further preferably 3 mass% or less.

[0091]

<7> The hair dye composition according to any one of <3> to <6>, in which the component (B2) is preferably a cationic surfactant represented by the following formula (1):

[0092]



(1)

[0093]

wherein, R^1, R^2, R^3 and R^4 each independently represent a hydrogen atom or a hydrocarbon group; one or two of R^1, R^2, R^3 and R^4 are a hydrocarbon group having 8 to 26 carbon atoms and the remainders represent a hydrogen atom or a hydrocarbon group having 1 to 7 carbon atoms; and X^- represents an anion.

[0094]

<8> The hair dye composition according to <7>, in which the component (B2) is one or more member selected from the group consisting of lauryl trimethyl ammonium chloride, cetyl trimethyl ammonium chloride, stearyl trimethyl ammonium chloride and behenyl trimethyl ammonium chloride.

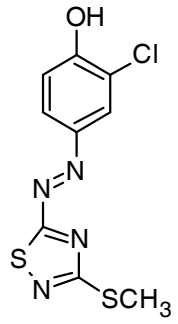
[0095]

<9> The hair dye composition according to any one of <3> to <8>, in which the content of the component (B2) in the whole composition is preferably 0.05 mass% or more, more preferably 0.1 mass% or more and further preferably 0.3 mass% or more ; and preferably 20 mass% or less, more preferably 18 mass% or less, further preferably 15 mass% or less, further preferably 10 mass% or less, further preferably 5 mass% or less, further preferably 3 mass% or less,

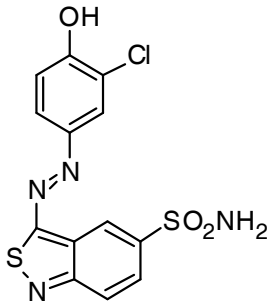
CLAIMS

1. A hair dye composition comprising the following components (A), (B) and (C) and having pH (25°C) of 7.5 or more and 12 or less:

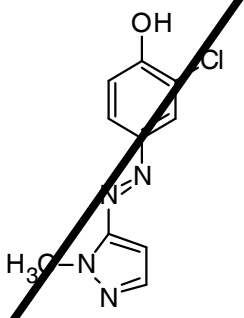
(A): one or more azo dyes selected from the group consisting of the following (A-1), (A-2) and (A-3):



(A-1)



(A-2)



(A-3)

(B): a cationic compound

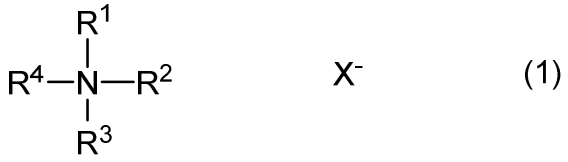
(C): 0.1 mass% or more and 8 mass% or less of at least one alkali metal salt of an acid selected from the group consisting of hydrochloric acid, carbonic acid and sulfuric acid.

2. The hair dye composition according to Claim 1, wherein the component (B) is at least one selected from the group consisting of a cationic polymer (B1) and a cationic surfactant (B2).

3. The hair dye composition according to Claim 2, wherein a nitrogen content in the component (B1) is 0.3 mass% or more and 9.0 mass% or less.

4. The hair dye composition according to Claim 2 or 3, wherein a content of the component (B1) is 0.01 mass% or more and 10 mass% or less of a whole composition.

5. The hair dye composition according to any one of Claims 2 to 4, wherein the component (B2) is a cationic surfactant represented by the following formula (1):



(1)

where R^1, R^2, R^3 and R^4 each independently represent a hydrogen atom or a hydrocarbon group; one or two of R^1, R^2, R^3 and R^4 have 8 to 36 carbon atoms and the remainders have 1 to 7 carbon atoms; and X^- represents an anion.

6. The hair dye composition according to Claim 5, wherein the component (B2) is one or more member selected from the group consisting of lauryl trimethyl ammonium chloride, cetyl trimethyl ammonium chloride, stearyl trimethyl ammonium chloride and behenyl trimethyl ammonium chloride.

7. The hair dye composition according to any one of Claims 2 to 6, wherein a content of the component (B2) is 0.05 mass% or more and 20 mass% or less of the whole composition.

8. The hair dye composition according to any one of Claims 1 to 7, further comprising an anionic surfactant (D1) or a nonionic surfactant (D2) as a component (D).

9. The hair dye composition according to Claim 8, wherein the component (D) is one or more member selected from the group consisting of an alkyl sulfate salt, a polyoxyalkylene alkyl sulfate salt, a fatty acid salt, an alkyl ether carboxylate salt, an alkyl glyceryl ether and an alkyl polyglucoside.

10. The hair dye composition according to Claim 8 or 9, wherein a content of the component (D) is 0.1 mass% or more and 20 mass% or less of the whole composition.

11. The hair dye composition according to any one of Claims 1 to 10, further comprising an alkali agent as a component (E) in an amount of 0.01 mass% or more and 20 mass% or less of the whole composition.

12. The hair dye composition according to any one of Claims 2 to 11, wherein a mass ratio of the component (B1) relative to a total of the component (A) and the component (C) in the whole composition, (B1)/[(A) + (C)], is 0.01 or more to 6 or less.

13. The hair dye composition according to any one of Claims 2 to 12, wherein a mass ratio of the component (B2) relative to a total of the component (A) and the component (C) in the whole composition, (B2)/[(A) + (C)], is 0.01 or more to 6 or less.

14. The hair dye composition according to any one of Claims 8 to 13, wherein a mass ratio of the component (B2) relative to a total of the component (A) and the component (D1) in the whole composition, (B2)/[(A) + (D1)], is 1.2 or less.

15. Use of the hair dye composition according to any one of Claims 1 to 14 for dyeing the hair.

16. A method for dyeing hair comprising applying the hair dye composition according to any one of Claims 1 to 14 to the hair,

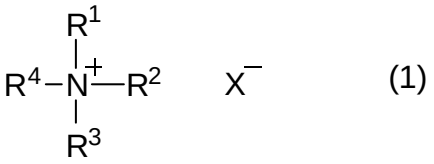
allowing to stand for 1 to 60 minutes and washing away the composition.

or less, further preferably 5 mass% or less, further preferably 4 mass% or less and further preferably 3 mass% or less.

[0091]

<7> The hair dye composition according to any one of <3> to <6>, in which the component (B2) is preferably a cationic surfactant represented by the following formula (1):

[0092]



(1)

[0093]

wherein, R^1, R^2, R^3 and R^4 each independently represent a hydrogen atom or a hydrocarbon group; one or two of R^1, R^2, R^3 and R^4 are a hydrocarbon group having 8 to 36 carbon atoms and the remainders represent a hydrogen atom or a hydrocarbon group having 1 to 7 carbon atoms; and X^- represents an anion.

[0094]

<8> The hair dye composition according to <7>, in which the component (B2) is one or more member selected from the group consisting of lauryl trimethyl ammonium chloride, cetyl trimethyl ammonium chloride, stearyl trimethyl ammonium chloride and behenyl trimethyl ammonium chloride.

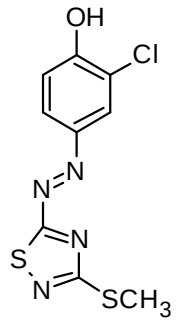
[0095]

<9> The hair dye composition according to any one of <3> to <8>, in which the content of the component (B2) in the whole composition is preferably 0.05 mass% or more, more preferably 0.1 mass% or more and further preferably 0.3 mass% or more ; and preferably 20 mass% or less, more preferably 18 mass% or less, further preferably 15 mass% or less, further preferably 10 mass% or less, further preferably 5 mass% or less, further preferably 3 mass% or less,

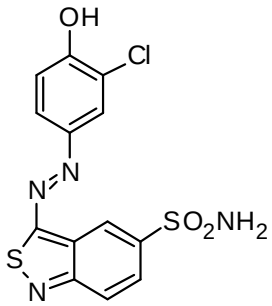
CLAIMS

1. A hair dye composition comprising the following components (A), (B) and (C) and having pH (25°C) of 7.5 or more and 12 or less:

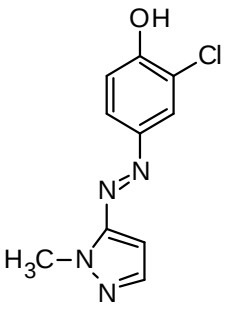
(A): one or more azo dyes selected from the group consisting of the following (A-1), (A-2) and (A-3):



(A-1)



(A-2)



(A-3)

(B): a cationic compound

(C): 0.1 mass% or more and 8 mass% or less of at least one alkali metal salt of an acid selected from the group consisting of hydrochloric acid, carbonic acid and sulfuric acid.

2. The hair dye composition according to Claim 1, wherein the molar ratio of a whole component (B) relative to the total of a component (A) and a component (C) in a whole composition, (B)/[(A) + (C)], is 0.08 or more and 7 or less.

3. The hair dye composition according to Claim 1 or 2, wherein the component (B) is at least one selected from the group consisting of a cationic polymer (B1) and a cationic surfactant (B2).

4. The hair dye composition according to Claim 3, wherein the mass ratio of a component (B1) relative to the total of a component

(A) and a component (C) in a whole composition, (B1)/[(A) + (C)], is 0.2 or more and 3 or less.

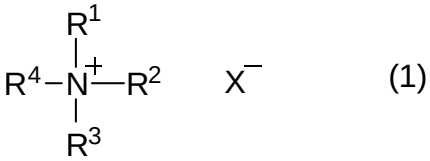
5. The hair dye composition according to Claim 3 or 4, wherein the mass ratio of a component (B2) relative to the total of a component (A) and a component (C) in a whole composition, (B2)/[(A) + (C)], is 0.2 or more and 0.9 or less.

6. The hair dye composition according to any one of Claims 3 to 5, wherein the component (B1) is one or more member selected from the group consisting of dimethyl diallyl ammonium chloride polymer, a dimethyl diallyl ammonium chloride/acrylic acid copolymer, a dimethyl diallyl ammonium chloride/acrylamide copolymer, a dimethyl diallyl ammonium chloride/acrylic acid/acrylamide polymer, a diethyl sulfate solution of a vinylpyrrolidone/N,N-dimethylaminoethyl methacrylate copolymer, O-[2-hydroxy-3-(trimethylammonio)propyl]hydroxyethylcellulose chloride and hydroxyethylcellulose/dimethyl diallyl ammonium chloride copolymer.

7. The hair dye composition according to any one of Claims 3 to 6, wherein a nitrogen content in the component (B1) is 0.3 mass% or more and 9.0 mass% or less.

8. The hair dye composition according to any one of Claims 3 to 7, wherein a content of the component (B1) is 0.01 mass% or more and 10 mass% or less of a whole composition.

9. The hair dye composition according to any one of Claims 3 to 8, wherein the component (B2) is a cationic surfactant represented by the following formula (1):



(1)

where R^1, R^2, R^3 and R^4 each independently represent a hydrogen atom or a hydrocarbon group; one or two of R^1, R^2, R^3 and R^4 represent a hydrocarbon group having 8 to 36 carbon atoms and the remainders represent a hydrogen atom or a hydrocarbon group having 1 to 7 carbon atoms; and X^- represents an anion.

10. The hair dye composition according to Claim 9, wherein the component (B2) is one or more member selected from the group consisting of lauryl trimethyl ammonium chloride, cetyl trimethyl ammonium chloride, stearyl trimethyl ammonium chloride and behenyl trimethyl ammonium chloride.

11. The hair dye composition according to any one of Claims 3 to 10, wherein a content of the component (B2) is 0.05 mass% or more and 20 mass% or less of the whole composition.

12. The hair dye composition according to any one of Claims 1 to 11, wherein the component (C) is one or more member selected from the group consisting of sodium chloride, potassium chloride, sodium carbonate, sodium hydrogen carbonate, potassium carbonate, potassium hydrogen carbonate, sodium sulfate and potassium sulfate.

13. The hair dye composition according to any one of Claim 1 to 11, wherein the component (C) is one or more alkali metal salt of an acid selected from the group consisting of hydrochloric acid and sulfuric acid.

14. The hair dye composition according to any one of Claim 1 to 11, wherein the component (C) is one or more member selected from the group consisting of sodium chloride, potassium chloride, sodium sulfate and potassium sulfate.

15. The hair dye composition according to any one of Claims 1 to 14, further comprising an anionic surfactant (D1) or a nonionic surfactant (D2) as a component (D).

16. The hair dye composition according to Claim 15, wherein the component (D1) is one or more member selected from the group consisting of an alkylbenzene sulfonate salt, an alkyl or alkenyl ether sulfate salt, an alkyl or alkenyl sulfate salt, an olefin sulfonate salt, an alkane sulfonate salt, a saturated or unsaturated fatty acid salt, an alkyl or alkenyl ether carboxylate salt, an α-sulfo fatty acid salt, a N-acylamino acid, a phosphoric acid mono- or diester and a sulfosuccinic acid ester.

17. The hair dye composition according to Claim 15 or 16, wherein the component (D2) is one or more member selected from the group consisting of a polyoxyalkylene alkyl ether, a polyoxyalkylene alkenyl ether, a higher fatty acid sucrose ester, a polyglycerin fatty acid ester, a higher fatty acid mono- or di-ethanolamide, a polyoxyethylene hardened castor oil, a polyoxyethylene sorbitan fatty acid ester, a polyoxyethylene sorbitol fatty acid ester, an alkyl saccharide, an alkylamine oxide and an alkylamidoamine oxide.

18. The hair dye composition according to any one of Claims 15 to 17, wherein the component (D) is one or more member selected

from the group consisting of an alkyl sulfate salt, a polyoxyalkylene alkyl sulfate salt, a fatty acid salt, an alkyl ether carboxylate salt, an alkyl glyceryl ether and an alkyl polyglucoside.

19. The hair dye composition according to any one of Claims 15 to 18, wherein a content of the component (D) is 0.1 mass% or more and 20 mass% or less of the whole composition.

20. The hair dye composition according to any one of Claims 1 to 19, further comprising an alkali agent as a component (E) in an amount of 0.01 mass% or more and 20 mass% or less of the whole composition.

21. The hair dye composition according to any one of Claims 15 to 20, wherein a mass ratio of the component (B2) relative to a total of the component (A) and the component (D1) in the whole composition, (B2)/[(A) + (D1)], is 1.2 or less.

22. The hair dye composition according to any one of Claims 1 to 21, wherein the content of oxidizing agent in a whole composition is 0.1 mass% or more and 12.0 mass% or less.

23. The hair dye composition according to any one of claims 1 to 22, in which the pH at 25°C upon application is 8 or more and 11.5 or less.

24. Use of the hair dye composition according to any one of Claims 1 to 23 for dyeing the hair.

25. A method for dyeing hair comprising applying the hair dye composition according to any one of Claims 1 to 23 to the hair, allowing to stand for 1 to 60 minutes and washing away the composition.