Title: FOAM OXIDATIVE HAIR COLORANT COMPOSITION

Abstract: An oxidative hair colorant composition to be dispensed from a manually-actuable, non-aerosol dispenser as a foam. The oxidative hair colorant composition contains a foam stabilizing agent and is essentially free of surfactant.
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What is claimed is:

1. An oxidative hair colorant product comprising:
   a) an oxidative hair colorant composition substantially free of surfactant comprising:
      a hair dye,
      an alkalizing agent, preferably selected from the group consisting of ammonium chloride, ammonium sulphate, ammonium nitrate, ammonium phosphate, ammonium acetate, ammonium carbonate, ammonium hydrogen carbonate, ammonium carbamate, ammonium hydroxide, percarbonate salts, ammonia, alkanolamides and mixtures thereof,
      an oxidizing agent, preferably selected from the group consisting of hydrogen peroxide, percarbonates, perphosphates and mixtures thereof, and
      a foam stabilizing agent selected from the group consisting of polymeric emulsifiers, polymeric foam stabilizers, and mixtures thereof; and
   b) a manually-actuable, non-aerosol dispenser,
wherein the composition is contained in the manually-actuable, non-aerosol dispenser and when the manually-actuable, non-aerosol dispenser is actuated, the composition is dispensed as a foam having a specific foam volume from about 6 ml/g to about 14 ml/g, preferably from about 7.5 ml/g to about 12 ml/g, more preferably from about 8 ml/g to about 10.5 ml/g.

2. The oxidative hair colorant composition of Claim 1 wherein said foam stabilizing agent is a polymeric foam stabilizer selected from the group consisting of:
   (1) hydroxypropyl methylcellulose, methylcellulose, cecetyl hydroxyethylcellulose and mixtures thereof;
   (2) an Acrylates/Steareth-20 Methacrylate Copolymer; an Acrylates Copolymer; and mixtures thereof.
   (3) an acrylate/C10-30 alkyl acrylate crosspolymer;
   (4) vinyl pyrrolidone (VP), dimethylaminopropyl methacrylamide (DAMPA) and methacryloylaminopropyl lauryldimonium chloride (MAPLAC);
   (5) a polyethyleneoxide-polypropyleneoxide-polyethyleneoxide block polymer terminating in primary hydroxyl groups; or
   (6) polysaccharides, cellulosic materials, amine-bearing polymers, acidic polymers obtainable from natural sources, chemically modified starches, carboxyvinyl polymers,
polyvinylpyrrolidone, polyvinyl alcohol, polyacrylic acid polymers, polymethacrylic acid polymers, polysiloxanes and mixtures thereof.

3. The oxidative hair colorant composition of Claim 1 wherein said foam stabilizing agent is present in an amount of from about 4 to about 25% by weight, preferably about 5 to about 15% by weight, and more preferably about 5 to about 10% by weight of the composition.

4. The oxidative hair colorant composition of Claim 1 which contains less than 200 ppm surfactant based on the composition.

5. An oxidative hair colorant composition comprising:
   a hair dye,
   an alkalizing agent,
   an oxidizing agent, and
   a foam stabilizing agent selected from the group consisting of polymeric emulsifiers, polymeric foam stabilizers, and mixtures thereof;
wherein the oxidative hair colorant composition comprises a low shear viscosity above 500 mPa-s, preferably from about 500 mPa-s to about 10,000 mPa-s; and a high shear viscosity of the oxidative hair colorant composition is less than 200 mPa-s, preferably less than 100 mPa-s.

6. A kit comprising components to form an oxidative hair colorant composition, the kit comprising:
   a tint composition component comprising a hair dye and an alkalizing agent;
   a developer composition component comprising an oxidizing agent;
   a manually-actuable, non-aerosol dispenser, the dispenser capable of dispensing a mixture of the tint composition component and developer composition component in a foam having a specific foam volume from about 6 ml/g to about 14 ml/g, preferably from about 7.5 ml/g to about 12 ml/g, and more preferably from about 8 ml/g to about 10.5 ml/g;
wherein a foam stabilizing agent selected from the group consisting of polymeric emulsifiers, polymeric foam stabilizers, and mixtures thereof is present in either the tint composition component or the developer composition component; wherein the mixture of the tint composition component and the developer composition component is essentially free of surfactant.
7. The kit of Claim 6 wherein said foam stabilizing agent is a polymeric foam stabilizers selected from the group consisting of:
   (1) hydroxypropyl methylcellulose, methylcellulose, cecetyl hydroxyethylcellulose and mixtures thereof;
   (2) an Acrylates/Steareth-20 Methacrylate Copolymer; an Acrylates Copolymer; and mixtures thereof.
   (3) an acrylate/C_{10-30} alkyl acrylate crosspolymer;
   (4) vinyl pyrrolidone (VP), dimethylaminopropyl methacrylamide (DMAPA) and methacroyloaminopropyl lauryldimonium chloride (MAPLAC);
   (5) a polyethyleneoxide-polypropyleneoxide-polyethyleneoxide block polymer terminating in primary hydroxyl groups; or
   (6) polysaccharides, cellulosic materials, amine-bearing polymers, acidic polymers obtainable from natural sources, chemically modified starches, carboxyvinyl polymers, polyvinylpyrrolidone, polyvinyl alcohol, polyacrylic acid polymers, polymethacrylic acid polymers, polysiloxanes and mixtures thereof.

8. An oxidative hair colourant composition according to claim 2 or 7, wherein said foam stabilizer is selected from a mixture of (2) an Acrylates/Steareth-20 Methacrylate Copolymer; an Acrylates Copolymer; and mixtures thereof, preferably Aculyn™22, and (3) an acrylate/C_{10-30} alkyl acrylate crosspolymer; preferably Aculyn™33, in a weight ratio of 1:2 to 1:5, preferably 1:3 to 1:5, or 4:1 to 1:1.

9. The kit of Claim 6 wherein said foam stabilizing agent is present in an amount in the range from about 4 to about 25% by weight, preferably about 5 to about 15% by weight, more preferably about 5 to about 10% by weight of the developer composition component.

10. The kit of Claim 6 wherein the mixture of the tint composition component and the developer composition comprises less than 200 ppm of surfactant.

11. The kit of Claim 6 wherein the manually-actuable, non-aerosol dispenser is equipped with a reservoir comprising a reservoir volume, a mixing chamber and a dispensing head; wherein the reservoir is capable of containing a mixture of the tint composition component and the developer composition component and when the manually-actuable, non-aerosol dispenser is actuated, the
mixture of the tint composition component and the developer composition component is mixed with air in a mixture to air ratio of from about 1:6 to about 1:15 and is dispensed as a foam

12. The kit of Claim 6 wherein the mixing chamber comprises at least one liquid ingress orifice, a foam egress orifice and an air ingress orifice.

13. An oxidative hair colourant composition according to claim 1 or 5, wherein said composition comprises from 0.5% to 6% hair dye, 0.1 to 10% alkalizing agent, 0.1 to 40% oxidizing agent, and 1-25% foam stabilizing agent.