CLAIMS

1. A method of treating hair to reduce or prevent breakage, comprising:

   mixing a cosmetic formulation with a cosmetically acceptable carrier to form a hair treatment formulation;

   wherein the cosmetic formulation comprises bis(2-ethylhexyl) maleate and one or more surfactants, wherein the amount of bis(2-ethylhexyl) maleate in the cosmetic formulation is at least 70% by weight, and wherein the amount of the one or more surfactants in the cosmetic formulation is 0.5-10% by weight; and

   wherein the cosmetically acceptable carrier comprises water; and

   applying the hair treatment formulation to damaged hair, wherein breakage of the hair is decreased by at least 5% compared to untreated hair.

2. The method of Claim 1, wherein the damaged hair is caused by bleaching, relaxing, coloring, perming, or heat styling, or combinations thereof.
3. The method of Claim 1, wherein the hair treatment formulation further comprises a coloring agent, a shampooing agent, or a conditioning agent, or combinations thereof.
4. The method of Claim 1, wherein the water is purified water.
5. The method of Claim 1, wherein the one or more surfactants in the cosmetic formulation comprises a cationic surfactant.
6. The method of Claim 1, wherein the cosmetic formulation further comprises a cosmetically acceptable diluent.
7. The method of Claim 6, wherein the cosmetically acceptable diluent in the cosmetic formulation comprises an alcohol.
8. The method of Claim 7, wherein the amount of the alcohol in the cosmetic formulation is 5-10% by weight.
9. The method of Claim 1, further comprising rinsing the hair treatment formulation applied to the hair.
10. The method of Claim 1, wherein the amount of bis(2-ethylhexyl) maleate in the cosmetic formulation is at least 80% by weight.
11. The method of Claim 1, wherein the amount of bis(2-ethylhexyl) maleate in the cosmetic formulation is 70-75% by weight.

12. The method of Claim 1, wherein the amount of the one or more surfactants in the cosmetic formulation is 1-5% by weight.
13. The method of Claim 1, wherein the hair treatment formulation further comprises one or more cosmetically acceptable excipients selected from the group consisting of a vitamin, a natural extract, a preservative, an antioxidant, a chelating agent, a protein, an amino acid, a humectant, a fragrance, an emollient, a penetrant, a thickener, a viscosity modifier, a hair fixative, a film former, an emulsifier, an opacifying agent, a propellant, a carrier, a salt, a buffer, an anti-static agent, an anti-frizz agent, an anti-dandruff agent, and a colorant, and combinations thereof.
14. The method of Claim 1, wherein the one or more surfactants is selected from the group consisting of 3-aminopropane sulfonic acid, almond amide, almond amidopropyl betaine, almond amidopropylamine oxide, aluminum hydrogenated tallow glutamate, aluminum lanolate, aminoethyl sulfate, aminopropyl lauryl glutamine, ammonium C12-15 alkyl sulfate, ammonium C12-15 pareth sulfate, ammonium C12-16 alkyl sulfate, ammonium C9-10 perfluoroalkylsulfonate, ammonium capryleth sulfate, ammonium capryleth-3 sulfate, ammonium monoglyceride sulfate, ammonium sulfate, ammonium isothionate, ammonium cocoyl sarcosinate, ammonium cumene sulfonate, ammonium dimethicone copolyol sulfate, ammonium dodecylbenzenesulfonate, ammonium isostearate, ammonium laureth sulfate, ammonium laureth-12 sulfate, ammonium laureth-5 sulfate, ammonium laureth-6 carboxylate, ammonium laureth-7 sulfate, ammonium laureth-8 carboxylate, ammonium laureth-9 sulfate, ammonium lauroyl sarcosinate, ammonium lauryl sulfate, ammonium lauryl sulfosuccinate, ammonium myreth sulfate, ammonium myristyl sulfate, ammonium nonoxynol-30 sulfate, ammonium nonoxynol-4 sulfate, ammonium oleate, ammonium palm kernel sulfate, ammonium polyacrylate, ammonium stearate, ammonium tallate, ammonium xylene sulfonate, ammonium xylene sulfonate, amp-isostearoyl gelatin/keratin amino acids/lysine hydroxypropyltrimonium chloride, amp-isostearoyl hydrolyzed collagen, apricot kernel oil PEG-6 esters, apricot amide, apricot amidopropyl betaine, arachideth-20, avocadamide, avocadamidopropyl betaine, babassuamide, babassuamidopropyl betaine, babassuamidopropylamine oxide, behenalkonium chloride, behenamide, behenamide, behenamidopropyl betaine,

behenamine oxide, sodium laureth sulfate, sodium lauryl sulfate, a polyoxyether of lauryl alcohol, ceteareth-20, and combinations thereof.

15. The method of Claim 1, wherein the one or more surfactants in the cosmetic formulation comprises an anionic surfactant.
16. The method of Claim 15, wherein the anionic surfactant is selected from the group consisting of sodium dodecylbenzene sulfonate, potassium dodecylbenzene sulfonate, ammonium dodecylbenzene sulfonate, sodium dodecylbenzene sulfonate, sodium bis-(2-ethylthioxyl)-sulfosuccinate, sodium lauryl sulfate, and combinations thereof.
17. The method of Claim 5, wherein the cationic surfactant is selected from the group consisting of benzalkonium chloride, benzethonium chloride, behentrimonium chloride, behentrimonium methosulfate, cetrimonium bromide, stearyl dimethylbenzyl ammonium chloride, a coconut amine, and combinations thereof.
18. The method of Claim 1, wherein the one or more surfactants in the cosmetic formulation comprises a nonionic surfactant.
19. The method of Claim 18, wherein the nonionic surfactant is selected from the group consisting of ethylene glycol monostearate, propylene glycol myristate, glyceryl monostearate, glyceryl stearate, polyglyceryl-4-oleate, sorbitan acylate, sucrose acylate, PEG-150 laurate, PEG-400 monolaurate, polyoxyethylene monolaurate, polysorbates, polyoxyethylene octylphenylether, PEG-1000 cetyl ether, polyoxyethylene tridecyl ether, polypropylene glycol butyl ether, Poloxamers, stearoyl monoisopropanolamide, polyoxyethylene hydrogenated tallow amide, and combinations thereof.
20. The method of Claim 1, wherein the one or more surfactants in the cosmetic formulation comprises a natural surface active agent.
21. The method of Claim 20, wherein the natural surface active agent is selected from the group consisting of saponin, lecithin, soybean phospholipid, hydrogenated soybean phospholipid, soybean lysophospholipid, hydrogenated soybean lysophospholipid, egg yolk lecithin, hydrogenated egg yolk lysophosphatidylcholine, phosphatidylcholine, phosphatidylethanolamine, phosphatidylserine, sphingophospholipid, sphingomyelin, ganglioside, bile acid, cholic acid, deoxycholic acid, sodium cholate, sodium deoxycholate, spiculisporic acid, rhamnolipid, trehalose lipid, sophorolipid, mannosyl erythritol lipid, surfactin, salts thereof, and combinations thereof.

22. The method of Claim 1, wherein the one or more surfactants in the cosmetic formulation comprises an amphoteric surfactant.
23. The method of Claim 1, wherein the cosmetic formulation is provided in a kit comprising a first container and a second container, wherein the first container comprises the cosmetic formulation.
24. The method of Claim 23, wherein the second container is a spray container.
25. The method of Claim 23, wherein the second container comprises the cosmetically acceptable carrier.
26. The method of Claim 23, further comprising adding the cosmetically acceptable carrier to the second container.
27. The method of Claim 23, wherein the cosmetic formulation and the cosmetically acceptable carrier are mixed in the second container to form the hair treatment formulation.
28. The method of Claim 27, wherein the hair treatment formulation is applied to damaged hair from the second container.
29. A method of treating hair to reduce or prevent breakage, comprising:

    mixing a cosmetic formulation with a cosmetically acceptable carrier to form a hair treatment formulation;

        wherein the cosmetic formulation comprises bis(2-ethylhexyl) maleate, one or more surfactants and a cosmetically acceptable diluent, wherein the amount of bis(2-ethylhexyl) maleate in the cosmetic formulation is at least 80% by weight, wherein the amount of the one or more surfactants in the cosmetic formulation is 1-5% by weight, wherein the cosmetically acceptable diluent comprises an alcohol; and

        wherein the cosmetically acceptable carrier comprises water; and

    applying the hair treatment formulation to damaged hair, wherein breakage of the hair is decreased by at least 5% compared to untreated hair.
30. The method of Claim 29, wherein the amount of the alcohol in the cosmetic formulation is 5-10% by weight.