WHAT IS CLAIMED IS:

1. A nanoemulsion comprising:

(A) an aqueous phase including:

(1) water or a water solution, and

(2) one or more water-soluble organic nanostructure stabilizers,

in which the water or water solution has a content less than 75% by weight of the aqueous phase, each of the water-soluble organic nanostructure stabilizers has a content less than 99% by weight of the aqueous phase, and at least one of the water-soluble organic nanostructure stabilizers is urea, xylitol, or glucosamine, and

(B) an oil phase including:

(1) an oil or an oil solution,

(2) an organic gel thickener, and

(3) a hydrophilic surfactant having a hydrophilic-lipophilic balance value greater than 8.0,

in which the oil or oil solution has a content less than 80% by weight of the oil phase, the organic gel thickener has a content less than 60% by weight of the oil phase, and the hydrophilic surfactant has a content less than 60% by weight of the oil phase,

wherein the water or water solution constitutes 2.5% by weight or more of the nanoemulsion, a weight ratio of the aqueous phase to the oil phase is 1:40-100:1, the aqueous phase is dispersed as nanosized droplets in the oil phase or the oil phase is dispersed as nanosized droplets in the aqueous phase, and the nanoemulsion is self-preserving, in the absence of an anti-microbial preservative, and has reversible continuous and dispersed phases.

2. The nanoemulsion of claim 1, wherein the oil phase is dispersed as the nanosized droplets in the aqueous phase.

3. The nanoemulsion of claim 1, wherein the aqueous phase is dispersed as the nanosized droplets in the oil phase.

4. The nanoemulsion of claim 2, wherein the hydrophilic-lipophilic balance value is greater than 10.

5. The nanoemulsion of claim 4, wherein the hydrophilic-lipophilic balance value is greater than 13.

6. The nanoemulsion of claim 3, wherein the hydrophilic-lipophilic balance value is greater than 10.

7. The nanoemulsion of claim 6, wherein the hydrophilic-lipophilic balance value is greater than 13.

8. The nanoemulsion of claim 4, wherein the water-soluble organic nanostructure stabilizer is a water-soluble vitamin, a water-soluble peptide, a water-soluble oligopepetide, a polyol, a water-soluble saccharide, a water-soluble oligosaccharide, a disaccharide, a mono-saccharides, a hydrogenated carbohydrate, an amino acid, amino sugar, or a combination thereof; the oil is a vegetable oil, a silicone oil, a synthetic oil, a mineral oil, an animal oil, an essential oil, or a combination thereof; and the organic gel thickener is saturated fatty acid, fatty acid alcohol, a fatty acid derivative having a melting point above 45°C, or a combination thereof.

9. The nanoemulsion of claim 4, wherein, also among the water-soluble organic nanostructure stabilizers, if any, is methylsulfonylmethane, hydroxyethyl urea, mannitol, sorbitol, lactose, fructose, dextrose, ribose, trehalose, raffinose, maltitol, isomalt, lactitol, erythritol, inositol, taurine, glycerin, propylene glycol, dipropylene glycol, butylene glycol, hexylene glycol, polyethylene glycol, ethoxydiglycol, carnitine, arginine, sodium pyrrolidone carboxylic acid, and hydrolyzed collagen, or a combination thereof; the oil is coconut oil, palm oil, grape seed oil, grape fruit seed oil, olive oil, avocado oil, evening primrose oil, tea tree oil, eucalyptus oil, lavender oil, rosemary oil, horse fat, fish oil, squalene, lanolin oil, squalene, cyclomethicone, cyclopentasiloxane, phenyl trimethicone, caprylic or capric triglyceride, isopropyl myristate, isostearyl isostearate, decyl oleate, ethylhexyl isononanoate, isohexadecane, octyldodecanol, paraffin oil, polyisobutene, polydecene, menthol, or a combination thereof; the organic gel thickener is stearic acid, lauric acid, glycerol monostearate, PEG 6000 Distearate, monoglyceride, diglyceride, saccharide fatty acid ester, propylene glycol fatty acid ester, glycol fatty acid ester, hexyl decyl fatty acid ester, fatty acid alcohol, cetyl stearate, ascorbyl fatty ester, glyceryl fatty ester, hexyldecyl fatty ester, or a combination thereof; and the hydrophilic surfactant is polyoxyethylene sorbitan fatty acid ester, polyoxyethylene sorbitol fatty acid ester, polyoxyethylene fatty acid ester, polyoxyethylene alcohol ester, nonyl phenol alkoxylate, alkyl alkoxylate, poly(ethylene glycol)-poly(propylene glycol)-poly(ethylene glycol) copolymer, PEG dimethicone, polyoxyethylene (40) fatty acid ester, polyoxyethylene (20) saccharide fatty acid ester, PEG-15 glyceryl fatty acid ester, PEG-35 hydrogenated castor oil, PEG-40 hydrogenated castor oil, polyglycerol fatty acid ester, fatty amine derivative, or a combination thereof.

10. The nanoemulsion of claim 9, wherein the hydrophilic-lipophilic balance value is greater than 13; the water or water solution has a content less than 60% by weight of the aqueous phase and the water-soluble organic nanostructure stabilizer has a content less than 50% by weight of the aqueous phase; the oil or oil solution has a content less than 45-65% by weight of the oil phase, the organic gel thickener has a content less than 25% by weight of the oil phase, and the hydrophilic surfactant has a

content less than 35% by weight of the oil phase; the water or water solution constitutes 30% by weight or less of the nanoemulsion and a weight ratio of the aqueous phase to the oil phase is 1:2-3:1; and the nanoemulsion has a pH of 3-11 and is transparent or translucent.

11. The nanoemulsion of claim 6, wherein the water-soluble organic nanostructure stabilizer is a water-soluble vitamin, a water-soluble peptide, a water-soluble oligopepetide, a polyol, a water-soluble saccharide, a water-soluble oligosaccharide, a disaccharide, a mono-saccharides, a hydrogenated carbohydrate, an amino acid, amino sugar, or a combination thereof; the oil is a vegetable oil, a silicone oil, a synthetic oil, a mineral oil, an animal oil, an essential oil, or a combination thereof; and the organic gel thickener is saturated fatty acid, fatty acid alcohol, a fatty acid derivative having a melting point above 45°C, or a combination thereof.

12. The nanoemulsion of claim 6, wherein, also among the water-soluble organic nanostructure stabilizers, if any, is methylsulfonylmethane, hydroxyethyl urea, mannitol, sorbitol, lactose, fructose, dextrose, ribose, trehalose, raffinose, maltitol, isomalt, lactitol, erythritol, inositol, taurine, glycerin, propylene glycol, dipropylene glycol, butylene glycol, hexylene glycol, polyethylene glycol, ethoxydiglycol, carnitine, arginine, sodium pyrrolidone carboxylic acid, and hydrolyzed collagen, or a combination thereof; the oil is coconut oil, palm oil, grape seed oil, grape fruit seed oil, olive oil, avocado oil, evening primrose oil, tea tree oil, eucalyptus oil, lavender oil, rosemary oil, horse fat, fish oil, squalene, lanolin oil, squalene, cyclomethicone, cyclopentasiloxane, phenyl trimethicone, caprylic or capric triglyceride, isopropyl myristate, isostearyl isostearate, decyl oleate, ethylhexyl isononanoate, isohexadecane, octyldodecanol, paraffin oil, polyisobutene, polydecene, menthol, or a combination thereof; the organic gel thickener is stearic acid, lauric acid, glycerol monostearate, PEG 6000 Distearate, monoglyceride, diglyceride, saccharide fatty acid ester, propylene glycol fatty acid ester, glycol fatty acid ester, hexyl decyl fatty acid ester, fatty acid alcohol, cetyl stearate, ascorbyl fatty ester, glyceryl fatty ester, hexyldecyl fatty ester, or a combination thereof; and the hydrophilic surfactant is polyoxyethylene sorbitan fatty acid ester, polyoxyethylene sorbitol fatty acid ester, polyoxyethylene fatty acid ester, polyoxyethylene alcohol ester, nonyl phenol alkoxylate, alkyl alkoxylate, poly(ethylene glycol)-poly(propylene glycol)-poly(ethylene glycol) copolymer, PEG dimethicone, polyoxyethylene (40) fatty acid ester, polyoxyethylene (20) saccharide fatty acid ester, PEG-15 glyceryl fatty acid ester, PEG-35 hydrogenated castor oil, PEG-40 hydrogenated castor oil, polyglycerol fatty acid ester, fatty amine derivative, or a combination thereof.

13. The nanoemulsion of claim 12, wherein the hydrophilic-lipophilic balance value is greater than 13; the water or water solution has a content less than 60% by weight of the aqueous phase and the water-soluble organic nanostructure stabilizer has a content less than 50% by weight of the aqueous phase; the oil or oil solution has a content less than 45-65% by weight of the oil phase, the organic gel

thickener has a content less than 25% by weight of the oil phase, and the hydrophilic surfactant has a content less than 35% by weight of the oil phase; the water or water solution constitutes 30% by weight or less of the nanoemulsion and a weight ratio of the aqueous phase to the oil phase is 1:2-3:1; and the nanoemulsion has a pH of 3-11 and is transparent or translucent.

14. The nanoemulsion of claim 8, wherein the water or water solution has a content less than 60% by weight of the aqueous phase and the water-soluble organic nanostructure stabilizer has a content less than 70% by weight of the aqueous phase; the oil or oil solution has a content 30-70% by weight of the oil phase, the organic gel thickener has a content less than 45% by weight of the oil phase, and the hydrophilic surfactant has a content less than 45% by weight of the oil phase; and the water or water solution constitutes 38% by weight or less of the nanoemulsion and a weight ratio of the aqueous phase to the oil phase is 1:3-4:1.

15. The nanoemulsion of claim 14, wherein the water or water solution has a content less than 45% by weight of the aqueous phase and the water-soluble organic nanostructure stabilizer has a content less than 50% by weight of the aqueous phase; the oil or oil solution has a content less than 45-65% by weight of the oil phase, the organic gel thickener has a content less than 25% by weight of the oil phase, and the hydrophilic surfactant has a content less than 35% by weight of the oil phase; and the water or water solution constitutes 30% by weight or less of the nanoemulsion and a weight ratio of the aqueous phase to the oil phase is 1:2-3:1.

16. The nanoemulsion of claim 11, wherein the water or water solution has a content less than 60% by weight of the aqueous phase and the water-soluble organic nanostructure stabilizer has a content less than 70% by weight of the aqueous phase; the oil or oil solution has a content 30-70% by weight of the oil phase, the organic gel thickener has a content less than 45% by weight of the oil phase, and the hydrophilic surfactant has a content less than 45% by weight of the oil phase; and the water or water solution constitutes 38% by weight or less of the nanoemulsion and a weight ratio of the aqueous phase to the oil phase is 1:3-4:1.

17. The nanoemulsion of claim 16, wherein the water or water solution has a content less than 45% by weight of the aqueous phase and the water-soluble organic nanostructure stabilizer has a content less than 50% by weight of the aqueous phase; the oil or oil solution has a content less than 45-65% by weight of the oil phase, the organic gel thickener has a content less than 25% by weight of the oil phase, and the hydrophilic surfactant has a content less than 35% by weight of the oil phase; and the water or water solution constitutes 30% by weight or less of the nanoemulsion and a weight ratio of the aqueous phase to the oil phase is 1:2-3:1.

18. The nanoemulsion of claim 15, wherein the nanoemulsion has a pH of 3-11 and is transparent or translucent.

19. The nanoemulsion of claim 17, wherein the nanoemulsion has a pH of 3-11 and is transparent or translucent.

20. The nanoemulsion of claim 1, wherein the nanoemulsion has a pH of 3-11 and is transparent or translucent.

21. The nanoemulsion of claim 1, wherein the nanoemulsion is a cosmetic product, a pharmaceutical product, a food product, a household chemical product, an agricultural product, a printing product, a dying product, a veterinary product, or a diagnostic product.

22. A method for preparing the nanoemulsion of claim 1, the method comprising:

(1) mixing water or a water solution and one or more water-soluble organic nanostructure stabilizers to form an aqueous phase, in which the water or water solution has a content less than 75% by weight of the aqueous phase and each of the water-soluble organic nanostructure stabilizers has a content less than 99% by weight of the aqueous phase, and at least one of the water-soluble organic nanostructure stabilizers is urea, xylitol, or glucosamine;

(2) mixing an oil or an oil solution, an organic thickener, and a hydrophilic surfactants having a hydrophilic-lipophilic balance value greater than 8.0 to form an oil phase, in which the oil or oil solution has a content less than 80% by weight of the oil phase, the organic gel thickener has a content less than 60% by weight of the oil phase, and the hydrophilic surfactant has a content less than 60% by weight of the oil phase; and

(3) mixing the aqueous phase and the oil phase, a weight ratio of the aqueous phase to the oil phase being 1:40-100:1, to form a nanoemulsion, in which the water or water solution constitutes 74% by weight or less of the nanoemulsion;

whereby the aqueous phase is dispersed as nanosized droplets in the oil phase or the oil phase is dispersed as nanosized droplets in the aqueous phase.