What is claimed is:

1. A production method of a composition comprising an acrylic acid-based polymer, characterized in that a hypophosphorous acid compound is used in an amount of 0.5 to 4.5 parts by mass based on 100 parts by mass of a total of monomers for forming structural units of said acrylic acid-based polymer, and that 1% to 50% by mass of a total amount of said hypophosphorous acid compound is added to a reactor before supplying said monomers,

wherein polymerization temperature of said monomers is in a range from 68°C to 82°C.

2. The production method of an acrylic acid-based polymer composition according to claim 1, wherein a mixture solution of water and isopropyl alcohol is used as a polymerization solvent.

3. The production method of an acrylic acid-based polymer composition according to claim 1 or 2, wherein a phosphorous acid ion is contained in an amount of 20 to 1,000 ppm by mass based on a solid content of said acrylic acid-based polymer.

4. The production method of an acrylic acid-based polymer composition according to claim 3, further comprising a hyphosphorous acid ion in an amount of 200 to 5,000 ppm by mass based on a solid content of said acrylic acid-based polymer.

5. The production method of an acrylic acid-based polymer composition according to any one of claims 1 to 4, wherein a weight average molecular weight of said acrylic acid-based polymer is in a range from 3,000 to 30,000.

6. A composition comprising an acrylic acid-based polymer obtained using acrylic acid and a phosphorous acid compound and/or a hypophosphorous acid compound as a raw material component, characterized in that a phosphorous acid ion is contained in an amount of 20 to 1,000 ppm by mass based on a solid content of said acrylic acid-based polymer.

7. The acrylic acid-based polymer composition according to claim 6, wherein said phosphorous acid compound and/or said hypophosphorous acid compound is used as a chain transfer agent.

8. An acrylic acid-based polymer composition comprising,

an acrylic acid-based polymer,

a phosphorous acid ion in an amount of 20 to 1,000 ppm by mass based on a solid content of said acrylic acid-based polymer, and,

a hyphosphorous acid ion in an amount of 200 to 5,000 ppm by mass based on a solid content of said acrylic acid-based polymer.

9. The acrylic acid-based polymer composition according to claim 8, wherein a weight average molecular weight of said acrylic acid-based polymer is in a range from 3,000 to 30,000.

10. A dispersant for calcium carbonate comprising an acrylic acid-based polymer composition according to any one of claims 6 to 9.

11. A detergent comprising an acrylic acid-based polymer composition according to any one of claims 6 to 9.

12. An inorganic precipitation inhibitor an acrylic acid-based polymer composition according to any one of claims 6 to 9.

CLAIMS

1. A production method of a composition comprising an acrylic acid-based polymer, characterized in that a hypophosphorous acid compound is used in an amount of 0.5 to 4.5 parts by mass based on 100 parts by mass of a total of monomers for forming structural units of said acrylic acid-based polymer, that 1% to 50% by mass of a total amount of said hypophosphorous acid compound is added to a reactor before supplying said monomers, and that a polymerization temperature of said monomers is in a range from 68℃ to 82℃.

2. The production method of an acrylic acid-based polymer composition according to claim 1, wherein a mixture solution of water and isopropyl alcohol is used as a polymerization solvent.

3. The production method of an acrylic acid-based polymer composition according to claim 1 or 2, wherein a phosphorous acid ion is contained in an amount of 20 to 1,000 ppm by mass based on a solid content of said acrylic acid-based polymer.

4. The production method of an acrylic acid-based polymer composition according to claim 3, further comprising a hypophosphorous acid ion in an amount of 200 to 5,000 ppm by mass based on a solid content of said acrylic acid-based polymer.

5. The production method of an acrylic acid-based polymer composition according to any one of claims 1 to 4, wherein a weight average molecular weight of said acrylic acid-based polymer is in a range from 3,000 to 30,000.

6. A composition comprising an acrylic acid-based polymer obtained using acrylic acid and, a phosphorous acid compound and/or a hypophosphorous acid compound as a raw material component, characterized in that a phosphorous acid ion is contained in an amount of 20 to 1,000 ppm by mass based on a solid content of said acrylic acid-based polymer.

7. An acrylic acid-based polymer composition comprising,

an acrylic acid-based polymer,

a phosphorous acid ion in an amount of 20 to 1,000 ppm by mass based on a solid content of said acrylic acid-based polymer, and,

a hypophosphorous acid ion in an amount of 200 to 5,000 ppm by mass based on a solid content of said acrylic acid-based polymer.

8. The acrylic acid-based polymer composition according to claim 7, wherein a weight average molecular weight of said acrylic acid-based polymer is in a range from 3,000 to 30,000.

9. A dispersant for calcium carbonate comprising an acrylic acid-based polymer composition according to any one of claims 6 to 8.

10. A detergent comprising an acrylic acid-based polymer composition according to any one of claims 6 to 8.

11. An inorganic precipitation inhibitor comprising an acrylic acid-based polymer composition according to any one of claims 6 to 8.