CLAIMS

Claim 1. A nucleic acid isolation method, comprising steps of:

mixing a specimen containing a nucleic acid with an extraction solution to disperse the nucleic acid in the extraction solution;

bringing the extraction solution containing the nucleic acid into contact with an anionic adsorbent;

bringing a washing solution into contact with the anionic adsorbent; and

bringing a collection solution into contact with the anionic adsorbent,

the extraction solution containing a protein denaturant,

the washing solution containing a basic compound and having a pH value equal to or less than a pKa value of a conjugate acid of the basic compound,

the basic compound containing at least one selected from the group consisting of melamine, piperazine, and 1,4-diazabicyclo[2.2.2]octane, and

the collection solution having a pH value equal to or more than the pKa value of the conjugate acid of the basic compound.

Claim 2. The nucleic acid isolation method according to claim 1, wherein the extraction solution further contains a metal cation having a valency of 2 or more.

Claim 3. A nucleic acid isolation method, comprising steps of:

mixing a specimen containing a nucleic acid with an extraction solution to disperse the nucleic acid in the extraction solution;

bringing the extraction solution containing the nucleic acid into contact with an anionic adsorbent; and

bringing a collection solution into contact with the anionic adsorbent,

the extraction solution containing a protein denaturant and a basic compound, and having a pH value equal to or less than a pKa value of a conjugate acid of the basic compound,

the basic compound containing at least one selected from the group consisting of melamine, piperazine, and 1,4-diazabicyclo[2.2.2]octane, and

the collection solution having a pH value equal to or more than the pKa value of the conjugate acid of the basic compound.

Claim 4. The nucleic acid isolation method according to any one of claims 1 to 3, wherein the pKa value of the conjugate acid of the basic compound is 4 or more and 6 or less.

Claim 5. The nucleic acid isolation method according to any one of claims 1 to 4, wherein the basic compound ~~has an amino group~~is melamine.

Claim 6. The nucleic acid isolation method according to any one of claims 1 to 5, wherein the extraction solution further contains a zwitterionic compound.

Claim 7. The nucleic acid isolation method according to any one of claims 1 to 6, wherein a step of bringing a solution containing an alcohol into contact with the anionic adsorbent is not comprised.

Claim 8. A nucleic acid isolation kit, comprising:

an extraction solution;

a washing solution;

a collection solution; and

an anionic adsorbent,

the extraction solution containing a protein denaturant,

the washing solution containing a basic compound and having a pH value equal to or less than a pKa value of a conjugate acid of the basic compound,

the basic compound containing at least one selected from the group consisting of melamine, piperazine, and 1,4-diazabicyclo[2.2.2]octane, and

the collection solution having a pH value equal to or more than the pKa value of the conjugate acid of the basic compound.

Claim 9. The nucleic acid isolation kit according to claim 8, wherein the extraction solution further contains a metal cation having a valency of 2 or more.

Claim 10. A nucleic acid isolation kit, comprising:

an extraction solution;

a collection solution; and

an anionic adsorbent,

the extraction solution containing a protein denaturant and a basic compound and having a pH value equal to or less than a pKa value of a conjugate acid of the basic compound,

the basic compound containing at least one selected from the group consisting of melamine, piperazine, and 1,4-diazabicyclo[2.2.2]octane, and

the collection solution having a pH value equal to or more than the pKa value of the conjugate acid of the basic compound.

Claim 11. A test chip comprising:

an extraction solution holding section in which an extraction solution containing a nucleic acid is held;

a washing solution holding section in which a washing solution is held;

a collection solution holding section in which a collection solution is held;

a collection section containing an anionic adsorbent; and

a nucleic acid analysis section,

the extraction solution containing a protein denaturant,

the washing solution containing a basic compound and having a pH value equal to or less than a pKa value of a conjugate acid of the basic compound,

the basic compound containing at least one selected from the group consisting of melamine, piperazine, and 1,4-diazabicyclo[2.2.2]octane, and

the collection solution having a pH value equal to or more than the pKa value of the conjugate acid of the basic compound.

Claim 12. The test chip according to claim 11, wherein the extraction solution further contains a metal cation having a valency of 2 or more.

Claim 13. A test chip comprising:

an extraction solution holding section in which an extraction solution containing a nucleic acid is held;

a collection solution holding section in which a collection solution is held;

a collection section containing an anionic adsorbent; and

a nucleic acid analysis section,

the extraction solution containing a protein denaturant and a basic compound and having a pH value equal to or less than a pKa value of a conjugate acid of the basic compound,

the basic compound containing at least one selected from the group consisting of melamine, piperazine, and 1,4-diazabicyclo[2.2.2]octane, and

the collection solution having a pH value equal to or more than the pKa value of the conjugate acid of the basic compound.