WHAT IS CLAIMED IS:

1. A composition comprising:

(a) triethanolamine (TEA);

(b) an ionic component; and

(c) an electrochemiluminescence (ECL)-labeled component,

wherein the composition has a pH of about 7.0 to about 8.0, and wherein the composition is substantially free of an additional pH buffering component.

2. A composition consisting essentially of:

(a) triethanolamine (TEA); (b) an ionic component; and (c) a surfactant, or

(a) triethanolamine (TEA); (b) an ionic component; (c) a surfactant; and (d) an ECL-labeled component,

wherein the composition has a pH of about 7.0 to about 8.0, and wherein the composition is substantially free of an additional pH buffering component.

3. The composition of claim 1 or 2, wherein the composition comprises:

(a) about 1000 mM to about 6500 mM of the TEA; and

(b) about 500 mM to about 2000 mM of the ionic component.

4. The composition of any one of claims 1 to 3, wherein the concentration of the TEA is about 1200 mM to about 1600 mM.

5. The composition of any one of claims 1 to 4, wherein the ionic component comprises chloride ion.

6. The composition of claim 2, wherein the surfactant is a non-ionic surfactant.

7. The composition of claim 6, wherein the surfactant is Poloxamer 407, block copolymer of poly(ethylene oxide) (PEO) and poly(propylene oxide) (PPO) PEO_{18}-PPO_{72}-PEO_{18}, block copolymer of poly(ethylene glycol) (PEG) and poly(propylene glycol) (PPG) PEG_5-PPG_{68}-PEG_5, PPO_{26}-PEO_5-PPO_{26}, ethylenediamine tetrakis(propoxylate-block-ethoxylate) tetrol, polyethylene glycol dodecyl ether, polyethylene glycol hexadecyl ether, polysorbate 20, 2,4,7,9-tetramethyl-d-decyne-4,7-diol ethoxylate, an alkyl ether-polyethylene glycol (PEG), or combination thereof.

8. The composition of any one of claims 1 to 7, wherein the composition is in dry form.

9. A method for generating electrochemiluminescence (ECL), comprising:

(a) contacting an electrode with:

(i) a composition comprising triethanolamine (TEA); an ionic component; and optionally a surfactant, or

the composition of any one of claims 1 to 8; and

(ii) an ECL label; and

(b) applying a voltage to the electrode, thereby generating ECL.

10. A method of detecting a binding complex, comprising:

(a) contacting a liquid sample with a surface comprising

a composition, wherein the composition comprises triethanolamine (TEA), an ionic component, and optionally a surfactant; or

the composition of any one of claims 1 to 8,

wherein the liquid sample comprises an ECL-labeled component; or wherein the liquid sample comprises a binding partner of an ECL-labeled component, and the method further comprises contacting the surface with the ECL-labeled component,

thereby forming a binding complex on the surface that comprises the ECL-labeled component;

(b) applying a voltage to the surface to generate ECL; and

(c) detecting the generated ECL, thereby detecting the binding complex.

11. A method of detecting a binding complex, comprising:

(a) contacting a liquid sample with a surface comprising an ECL-labeled component and

a composition, wherein the composition comprises triethanolamine (TEA), an ionic component, and optionally a surfactant; or

the composition of any one of claims 1 to 8,

wherein the liquid sample comprises a binding partner of an ECL-labeled component,

thereby forming a binding complex on the surface that comprises the ECL-labeled component;

(b) applying a voltage to the surface to generate ECL; and

(c) detecting the generated ECL, thereby detecting the binding complex.

12. A method for detecting a binding complex, comprising:

(a) forming a binding complex on a surface, wherein the surface optionally comprises an electrode, and wherein the binding complex comprises an ECL-labeled component;

(b) contacting the binding complex with:

a composition comprising triethanolamine (TEA), an ionic component, and optionally a surfactant; or

the composition of any one of claims 1 to 8;

(c) applying a voltage to the surface to generate ECL; and

(d) detecting the generated ECL, thereby detecting the binding complex.

13. A method for detecting an analyte of interest in a sample, comprising:

(a) contacting the sample with: (i) a surface comprising a binding reagent, wherein the binding reagent specifically binds to the analyte; and (ii) a detection reagent that specifically binds to the analyte, wherein the detection reagent comprises an ECL label, thereby forming a binding complex on the surface comprising the binding reagent, the analyte, and the detection reagent;

(b) contacting the binding complex on the surface with:

a composition comprising triethanolamine (TEA), an ionic component, and optionally a surfactant; or

the composition of any one of claims 1 to 8;

(c) applying a voltage to the surface to generate ECL; and

(d) detecting the generated ECL, thereby detecting the analyte.

14. The method of any one of claims 9 to 13, wherein the method does not comprise a wash step.

15. A method for detecting a binding complex, comprising:

(a) forming an assay mixture by combining a sample with:

i. a composition comprising triethanolamine (TEA), an ionic component, and optionally a surfactant, or

the composition of any one of claims 1 to 8; and

ii. a detection mixture comprising at least two copies of a detection reagent, wherein each copy of the detection reagent comprises an ECL label;

(b) contacting the assay mixture with a binding reagent immobilized on a surface, wherein the surface optionally comprises an electrode, under conditions wherein

i. a binding complex is formed on the surface, the binding complex comprising the binding reagent and a first copy of the detection reagent; and

ii. a second copy of the detection reagent remains in solution;

(c) applying a voltage to the surface to generate ECL; and

(d) detecting the generated ECL, thereby detecting the binding complex.

16. A method for detecting a binding complex, comprising:

(a) incubating an assay mixture comprising:

i. a binding reagent immobilized on a surface, wherein the surface optionally comprises an electrode; and

ii. a detection mixture comprising at least two copies of a detection reagent, wherein each copy of the detection reagent comprises an ECL label;

under conditions wherein

i. a binding complex is formed on the surface, the binding complex comprising the binding reagent and a first copy of the detection reagent; and

ii. a second copy of the detection reagent remains in solution;

(b) contacting the binding complex with:

a composition comprising triethanolamine (TEA), an ionic component, and optionally a surfactant; or

the composition of any one of claims 1 to 8;

(c) applying a voltage to the surface to generate ECL; and

(d) detecting the generated ECL, thereby detecting the binding complex.

17. A method for detecting a binding complex, comprising:

(a) incubating an assay mixture comprising:

i. a binding reagent immobilized on a surface, wherein the surface optionally comprises an electrode;

ii. a detection mixture comprising at least two copies of a detection reagent, wherein each copy of the detection reagent comprises an ECL label; and

iii. a composition comprising triethanolamine (TEA), an ionic component, and optionally a surfactant; or

the composition of any one of claims 1 to 8;

under conditions wherein

i. a binding complex is formed on the surface, the binding complex comprising the binding reagent and a first copy of the detection reagent; and

ii. a second copy of the detection reagent remains in solution;

(b) applying a voltage to the surface to generate ECL; and

(c) detecting the generated ECL, thereby detecting the binding complex.

18. A method for quantifying the amount of an ECL label in a sample, comprising:

(a) contacting an electrode with

(i) a composition comprising triethanolamine (TEA), an ionic component, and optionally a surfactant, or

the composition of any one of claims 1 to 8; and

(ii) the sample comprising the ECL label;

(b) applying a voltage to the electrode;

(c) generating ECL;

(d) measuring the ECL; and

(e) quantifying the amount of the ECL label from the measured ECL.

19. A kit comprising, in one or more containers, vials, or compartments:

(a) a composition comprising triethanolamine (TEA), an ionic component, and optionally a surfactant; or

the composition of any one of claims 1 to 8; and

(b) optionally a surface comprising an electrode,

optionally wherein the composition does not comprise an additional pH buffering component.

20. The kit of claim 19, further comprising an assay instrument, an assay reagent, a calibration reagent, an ECL label, or combination thereof.