WHAT IS CLAIMED IS:

1. A cartridge for bacterial endotoxin testing comprising:

(a) a housing defining a fluid inlet port, an optical cell, and a conduit having a fluid contacting surface providing fluid flow communication between the fluid inlet port and the optical cell;

(b) a first composition dried on a first region of the fluid contacting surface of the conduit; and

(c) a second composition dried on a second region of the fluid contacting surface of the conduit,

wherein the first region is spaced apart from the second region, such that, when a liquid sample is applied to the fluid inlet port, the sample traverses the first region and solubilizes the first composition, and then traverses the second region and solubilizes the second composition, during transport to the optical cell, and

wherein, the first and second compositions are selected from the group consisting of recombinant Factor B and recombinant Factor C, provided that the first composition is not the same as the second composition.

2. The cartridge of claim 1, wherein the Factor C, the Factor B, or the Factor B and Factor C remain substantially inactive until contacted with microbial endotoxin in a liquid sample introduced into the cartridge via the fluid inlet port.

3. The cartridge of claims 1-2, wherein the first or second composition further includes recombinant pro-clotting enzyme.

4. The cartridge of any one of claims 1-3, further comprising a third composition comprising recombinant pro-clotting enzyme dried on a third region of the fluid contacting surface of the conduit spaced apart from the first and second regions, wherein the third region is in fluid communication with the first, the second, or the first and second regions.

5. The cartridge of claim 4, further comprising a fourth composition comprising a chromogenic substrate dried on a fourth region of the fluid contacting surface of the conduit spaced apart from the

first, second, and third regions, and wherein the fourth region is in fluid flow communication with one or more of the first, second, or third regions.

6. The cartridge of any one of claims 1-3, further comprising a third composition comprising a chromogenic substrate dried on a third region of the fluid contacting surface of the conduit spaced apart from the first and second regions and wherein the third region is in fluid flow communication with the first region, the second region, or the first and second regions.

7. The cartridge of claim 6, further comprising a fourth composition comprising a recombinant pro-clotting enzyme dried on a fourth region of the fluid contacting surface of the conduit spaced apart from the first, second, and third regions, and wherein the fourth region is in fluid flow communication with one or more of the first, second, or third regions.

8. The cartridge of any one of claims 1-7, wherein the first composition on the first region comprises recombinant Factor C and not recombinant Factor B and the second composition on the second region comprises recombinant Factor B and not recombinant Factor C.

9. The cartridge of any one of claims 1-7, wherein the first composition on the first region comprises recombinant Factor B and not recombinant Factor C and the second composition on the second region comprises recombinant Factor C and not recombinant Factor B.

10. The cartridge of claim 6, wherein the third region of the fluid contacting surface is positioned between the sample inlet area or fluid inlet port and the first region, and the second region of the fluid contacting surface is positioned between the first region and the optical cell.

11. The cartridge of claim 10, wherein the first composition on the first region comprises recombinant Factor B and not recombinant Factor C, and the second composition on the second region comprises recombinant Factor C and not recombinant Factor B, and a recombinant pro-clotting enzyme.

12. The cartridge of any one of claims 1-11, wherein the recombinant factor C (i) lacks an (α-2,3)-linked terminal sialic acid, (ii) is expressed in a GnTI$^-$ HEK cell line, (iii) is recombinant *Limulus polyphemus* recombinant factor C, or (iv) comprises the amino acid sequence of SEQ ID NO:1, or (v) is a combination of any of elements (i)-(iv).

13. The cartridge of any one of claims 1-12, wherein the recombinant factor B (i) is recombinant *Limulus polyphemus* recombinant factor B, (ii) comprises the amino acid sequence of SEQ ID NO:3, or (iii) is a combination of elements (i) and (ii).

14. The cartridge of any one of claims 3-13, wherein the recombinant pro-clotting enzyme is (i) a recombinant *Limulus polyphemus* pro-clotting enzyme, (ii) comprises the amino acid sequence of SEQ ID NO:5, or (iii) is a combination of elements (i) and (ii).

15. The cartridge of any one of claims 1-11, wherein (i) the recombinant factor B is a recombinant *Limulus polyphemus* factor B, (ii) the recombinant factor C is recombinant *Limulus polyphemus* recombinant factor C, and (iii) the recombinant pro-clotting enzyme is recombinant *Limulus polyphemus* pro-clotting enzyme; or (iv) the cartridge comprises one or more of elements (i), (ii), or (iii).

16. The cartridge of any one of claims 3-15, wherein (i) the recombinant factor B comprises the amino acid sequence of SEQ ID NO:3, (ii) the recombinant factor C comprises the amino acid sequence of SEQ ID NO:1, and (iii) the recombinant pro-clotting enzyme comprises the amino acid sequence of SEQ ID NO:5; or the cartridge comprises one or more of elements (i), (ii) and (iii).

17. A cartridge for bacterial endotoxin testing comprising: (a) a housing defining a fluid inlet port, an optical cell, and a conduit having a fluid contacting surface providing fluid flow communication between the fluid inlet port and the optical cell; (b) (i) a first composition dried on a first region of the fluid contacting surface of the conduit, the first composition comprising recombinant Factor B, but not recombinant Factor C; and a second composition dried on a second region of the fluid contacting surface of the conduit, the second composition comprising recombinant Factor C and recombinant pro-clotting enzyme, but not recombinant Factor B; or (ii) a first composition dried on a first region of the fluid contacting surface of the conduit, the first composition comprising recombinant Factor C, but not recombinant Factor B; and a second composition dried on a second region of the fluid contacting surface of the conduit, the second composition comprising recombinant Factor B and recombinant pro-clotting enzyme, but not recombinant Factor C; and (c) a third composition dried on a third region of the fluid contacting surface of the conduit, the third composition comprising a chromogenic substrate; wherein the first region is spaced apart from the second region, such that, when a liquid sample is applied to the fluid inlet port, the sample traverses the first region and solubilizes the first composition, and then

traverses the second region and solubilizes the second composition during transport to the optical cell; wherein the third region of the fluid contacting surface is positioned between the fluid inlet port and first region, and the second region is positioned on the cartridge or fluid contacting surface between the first region and the optical cell; wherein the recombinant factor B is a recombinant *Limulus polyphemus* factor B, the recombinant factor C is a recombinant *Limulus polyphemus* factor C, and the recombinant pro-clotting enzyme is a recombinant *Limulus polyphemus* pro-clotting enzyme.

18. The cartridge of claim 17, wherein the first composition dried on the first region of the fluid contacting surface of the conduit comprises recombinant Factor B, but not recombinant Factor C, and the second composition dried on the second region of the fluid contacting surface of the conduit comprises recombinant Factor C and recombinant pro-clotting enzyme, but not recombinant Factor B.

19. The cartridge of claim 17, wherein the first composition dried on the first region of the fluid contacting surface of the conduit comprises recombinant Factor C, but not recombinant Factor B, and the second composition dried on the second region of the fluid contacting surface of the conduit comprises recombinant Factor B and recombinant pro-clotting enzyme, but not recombinant Factor C.

20. The cartridge of any one of claims 5-19, wherein the chromogenic substrate is selected from Ac-Ile-Glu-Gly-Arg-pNA (SEQ ID NO:13), wherein Ac is an acetyl group and pNA is a para-nitroaniline group; or Ac-Ile-Glu-Gly-Lys-pNA (SEQ ID NO:14), wherein Ac is an acetyl group and pNA is a para-nitroaniline group.