

CLAIM(S):

1. A method of assaying a sample for endotoxin, the method comprising:
 - (a) placing a sample to be assayed in contact with LAL reagent, wherein endotoxin, if present in the sample, reacts with the reagent and a clotted product is formed;
 - (b) contacting a tip of an optical fiber with the sample, wherein clotted product, if present, forms on and/or binds to the tip of the optical fiber, wherein the tip of the optical fiber has an optical thickness, and the optical thickness increases from an initial thickness when clotted product forms on and/or binds to the tip of the optical fiber;
 - (c) determining the optical thickness at the tip of the optical fiber after contact with the sample, wherein an increase in optical thickness from the initial thickness indicates the presence of endotoxin, and an absence of an increase in optical thickness indicates the absence of endotoxin.
2. The method of claim 1, comprising determining a concentration of endotoxin in the sample.
3. The method of claim 1 or 2, comprising placing the sample in a sample receiving chamber, passing the sample from the sample receiving chamber to a reaction chamber having the LAL reagent therein, wherein the tip of the optical fiber contact the sample in the reaction chamber, and determining the optical thickness at the tip of the optical fiber after contact with the sample.
4. The method of any one of claims 1-3, including contacting the tips of a plurality of optical fibers with the sample, and determining the optical thicknesses at the tips of the optical fibers after contact with the sample.
5. The method of any one of claims 1-4, wherein a plurality of optical tips are arranged in a bundle, and the method includes contacting the tips of the plurality of optical fibers with the sample, and determining the optical thicknesses at the tips of the optical fibers after contact with the sample.

6. A kit for assaying a sample for endotoxin, the kit comprising a biosensor comprising an optical fiber having a tip, and a housing, the housing comprising a base and a cap, the base comprising a groove, and a reaction chamber having a side wall, the reaction chamber having an aperture passing through the side wall, the aperture communicating with the groove; the cap comprising a sample receiving chamber, and a projection including a sidewall and at least one aperture passing through the projection side wall, wherein the cap is removably engageable with the base.

7. The kit of claim 6, further comprising LAL reagent and a biosensor comprising an optical fiber having a tip, wherein the reaction chamber has LAL reagent therein, and the optical fiber is arranged in the groove of the base, wherein the optical fiber tip communicates with the reaction chamber through the aperture.

8. The kit of claim 6 or 7, including a plurality of biosensors and a plurality of reaction chambers, wherein each reaction chamber communicates with the tip of an optical fiber.

CLAIMS

1. A method of assaying a sample for endotoxin, the method comprising:
 - (a) placing a sample to be assayed in contact with LAL reagent, wherein endotoxin, if present in the sample, reacts with the reagent and a clotted product is formed;
 - (b) contacting a tip of an optical fiber with the sample, wherein the tip of the optical fiber does not include an analyte-binding molecule; wherein the clotted product, if present, forms on and/or binds to the tip of the optical fiber, wherein the tip of the optical fiber has an optical thickness, and the optical thickness increases from an initial thickness when clotted product forms on and/or binds to the tip of the optical fiber;
 - (c) determining the optical thickness at the tip of the optical fiber after contact with the sample, wherein an increase in optical thickness from the initial thickness indicates the presence of endotoxin, and an absence of an increase in optical thickness indicates the absence of endotoxin.
2. The method of claim 1, comprising determining a concentration of endotoxin in the sample.
3. The method of claim 1 or 2, comprising placing the sample in a sample receiving chamber, passing the sample from the sample receiving chamber to a reaction chamber having the LAL reagent therein, wherein the tip of the optical fiber contact the sample in the reaction chamber, and determining the optical thickness at the tip of the optical fiber after contact with the sample.
4. The method of any one of claims 1-3, including contacting the tips of a plurality of optical fibers with the sample, and determining the optical thicknesses at the tips of the optical fibers after contact with the sample.
5. The method of any one of claims 1-4, wherein a plurality of optical tips are arranged in a bundle, and the method includes contacting the tips of the plurality of optical fibers with the sample, and determining the optical thicknesses at the tips of the optical fibers after contact with the sample.

6. A kit for assaying a sample for endotoxin, the kit comprising a biosensor comprising an optical fiber having a tip, wherein the tip of the optical fiber does not include an analyte-binding molecule, and a housing, the housing comprising a base and a cap, the base comprising a groove, and a reaction chamber having a side wall, the reaction chamber having an aperture passing through the side wall, the aperture communicating with the groove; the cap comprising a sample receiving chamber, and a projection including a sidewall and at least one aperture passing through the projection side wall, wherein the cap is removably engageable with the base.

7. The kit of claim 6, further comprising LAL reagent and a biosensor comprising an optical fiber having a tip, wherein the reaction chamber has LAL reagent therein, and the optical fiber is arranged in the groove of the base, wherein the optical fiber tip communicates with the reaction chamber through the aperture.

8. The kit of claim 6 or 7, including a plurality of biosensors and a plurality of reaction chambers, wherein each reaction chamber communicates with the tip of an optical fiber.