CLAIMS:

1. A device for separating and concentrating target particles or molecules from a fibrinogen-containing liquid sample that is capable, when introduced into a container of the device, to form a polymerized fibrin pellet (9) in which target particles or molecules are trapped, the device comprising: a container (1) for collecting the sample, the container comprising a first top end, a second bottom end and at least one interior wall defining a reservoir portion (5) for receiving the sample, wherein said reservoir portion comprises at least one anchor element (4) configured to locally hook with the polymerized fibrin pellet (9) in which target particles or molecules are trapped, after its formation upon addition of the sample into the container (1), wherein the container (1) comprises an elongated pin element (3) extending in the reservoir portion (5), the anchor element (4) is located at or towards the end of said pin element (3), and wherein the anchor element (4) comprises a local surface coating around which the polymerized fibrin pellet will be locally attached.

2. A device according to claim 1, wherein the volume of the container (1) is between 0.1 to 20 ml.

3. A device according to claim 1, wherein thrombin or a thrombin-like enzyme is initially included within said container (1).

4. A device according to claim 1, for cooperation with a sample wherein a fibrinogen-containing sample is formed upon introducing a fibrinogen-free sample into the container (1) that initially includes fibrinogen.

5. A device according to claims 3 and 4, wherein said thrombin and/or fibrinogen is included in the container (1) in a lyophilized form.

6. A device according to claim 1, wherein the first top end of the container (1) is an open end closed by a closure cap (2) that comprises the elongated pin element (3) extending in the reservoir portion (5), and wherein the anchor element (4) is located at or towards the end of said pin element (3).

7. A device according to claim 1, wherein the second bottom end of the container (1) is closed and comprises the elongated pin element (3) extending in the reservoir portion (5) and wherein the anchor element (4) is located at or towards the end of said pin element (3).

8. A device according to claim 1, wherein the anchor element (4) forms a shaped hook around which the polymerized fibrin pellet will be locally trapped.

9. A device according to claim 1, wherein said surface coating is hydrophobic.

10. A method for separating and concentrating target particles or molecules out of a fibrinogen-containing sample using the device of claim 1, the method comprising the steps of:

    (a) adding a said sample to the device container (1),

    (b) converting fibrinogen within the sample at least partially into fibrin, thereby forming a fibrin network that will trap the said target molecules or particles,

    (c) retracting the formed fibrin network of step (b) into a small pellet hooked around the device's anchor element (4),

(d) separating the polymerized fibrin pellet of step (c) from the surrounding sample medium.

11. A method according to claim 10 using the device according to claim 6, wherein the separation step (d) is achieved by removing the closure cap (2) containing the anchor element (4) from the container (1).

12. A method according to claim 10 using the device according to claim 7, wherein the separation step (d) is achieved by decanting the surrounding sample from the container (1).

13. A method according to claim 10, wherein the method further comprises the step (e) of resuspending the polymerized fibrin pellet in a liquid medium that allows lysis of the said fibrin pellet, thereby recovering the said target molecules or particles.

14. A method according to claims 13 and 11, wherein a recovery step (e) is achieved by immersing the closure cap (2) in a resuspension container (6), containing a resuspending liquid medium (7).

15. A method according to claims 13 and 12, wherein a recovery step (e) is achieved by adding a resuspending liquid medium (7) to the container (1).

16. A method according to claim 10, wherein the size of the fibrin pellet is at most 1/10 of the initial sample volume.

17. A method according to claim 13, wherein the volume of the resuspending liquid medium of step (e) is at most 1/10 of the initial sample volume.

18. A device or method according to any of claims 1 - 17, wherein the said target molecules or particles comprise bacteria, virus, yeast, cells, proteins, peptides or nucleic acids.