CLAIMS

1. A multiplex analysis method making it possible to improve the detection of a signal corresponding to the presence of an analyte comprising the following steps:

a) providing a solid support comprising at least one compartment, said compartment comprising at least two spots intended for the detection of an analyte,

b) placing a specimen to be analyzed in the presence of the spots of said compartment,

c) placing at least one detection ligand of an analyte in the presence of the spots of said compartment, said detection ligand of an analyte being coupled to a direct or indirect detection marker,

d) when said detection marker is an indirect detection marker, placing a reporter of the indirect detection marker coupled to said detection ligand in the presence of the spots of said compartment,

e) when the reporter used in step d) is coupled to an indirect marker, placing a reporter of the indirect detection marker coupled to said reporter in the presence of the spots of said compartment,

f) placing absorbent particles in the presence of the spots of said compartment, said absorbent particles being comprised in a liquid phase in contact with the spots of said compartment, and said absorbent particles are carbon particles or color particles, and

g) detecting a signal corresponding to the presence of an analyte at the spots of said compartment, in the presence of the liquid phase comprising said absorbent particles, wherein the method comprises one or several wash steps that make it possible to eliminate the compounds not bonded to the spots or to the various compounds directly or indirectly bonded to the spots, provided that no wash step is done between step f) and step g).

2. The method according to claim 1, characterized in that the signal is detected in step g) through the bottom of the solid support.

3. The method according to claim 1 or 2, characterized in that the signal detected in step g) is the signal emitted by a luminescent compound and/or the signal emitted by a fluorophore.

4. The method according to one of claims 1 to 3, characterized in that the absorbent particles are provided in the form of an absorbent composition comprising at least one compound selected from the group consisting of the

luminol, the isoluminol, a derivative of the luminol or of the isoluminol, an electron mediator and an oxidizer.

5. A use of absorbent particles to decrease the background noise in a multiplex analysis method on a solid support comprising at least one compartment, said compartment comprising at least two spots, wherein said absorbent particles are carbon particles or color particles, and wherein said method comprises one or several wash steps that make it possible to eliminate the compounds not bonded to the spots or to the various compounds directly or indirectly bonded to the spots.

6. The use according to claim 5, characterized in that the detection of a signal corresponding to the presence of an analyte is done in the presence of a liquid phase.

7. The use according to claim 5 or 6, characterized in that the detected signal to background noise ratio is increased.

8. The use according to one of claims 5 to 7, characterized in that the signal corresponding to the presence of an analyte is emitted by a chemiluminescent compound and/or a fluorophore.

9. An absorbent composition appropriate for carrying out the multiplex analysis method according to one of claims 1 to 4 comprising (i) absorbent particles selected from the group consisting of carbon particles and color particles, and (ii) at least one compound selected from the group consisting of the luminol, the isoluminol, a derivative of the luminol or of the isoluminol, an electron mediator and an oxidizer.

10. A kit appropriate for carrying out the multiplex analysis method according to one of claims 1 to 4, said kit comprising at least two compositions:

- a first composition comprising at least one compound selected from the group consisting of the luminol, the isoluminol and a derivative of the luminol or the isoluminol, and, optionally, comprising at least one electron mediator, and

- a second composition comprising at least one oxidizer,

characterized in that the first composition and/or the second composition comprises absorbent particles and/or in that said kit comprises a third composition comprising absorbent particles, and that said absorbent particles are selected from the group consisting of carbon particles and color particles.