

30. A method according to claim 27, wherein analyzing the content of each droplet includes:

- a) aspirating each droplet into a dispensing unit; and
- b) presenting each droplet for analysis via the dispensing unit.

31. A method according to claim 30, wherein presenting each droplet for analysis includes:

- a) presenting each droplet to a mass spectrometer; and
- b) determining a characteristic of each droplet by means of mass spectrometry.

32. A method according to claim 27, wherein analyzing a characteristic of each droplet includes:

- a) heating each droplet so as to form an atomized spray; and
- b) determining a characteristic each droplet by means of mass spectrometry.

33. A method according to claim 27, wherein analyzing a characteristic of each droplet includes:

- a) applying a pneumatic force to each droplet so as to form an atomized spray; and
- b) determining a characteristic of each droplet by means of mass spectrometry.

34. A method according to claim 27, wherein analyzing a characteristic of each droplet includes:

- a) applying an explosive force to each droplet so as to form an atomized spray; and
- b) determining a characteristic of each droplet by means of mass spectrometry.

35. A method according to claim 27, wherein analyzing a characteristic of each droplet includes:

- a) vibrating each droplet so as to cause atomization; and
- b) determining a characteristic of each droplet by means of mass spectrometry.

36. A method according to claim 35, wherein vibrating the droplet includes focusing a pulsed laser onto the surface in a proximity of each droplet.

37. A method according to claim 35, wherein vibrating each droplet includes focusing a pulsed laser onto the backside of the surface onto which each droplet has been deposited.

38. A method according to claim 35, wherein vibrating each droplet includes utilizing acoustic waves.

39. A method according to claim 35, wherein vibrating each droplet includes mechanically vibrating the surface.

40. A method according to claim 35, further comprising applying a voltage to the surface onto which each droplet is deposited to assist in the formation of atomized spray.

41. A method according to claim 9, further comprising spooling a laminate onto the moving surface prior to dispensing each droplet onto the moving surface.

42. A method according to claim 41, further comprising spooling the laminate off of the moving surface after performing at least one operation on each droplet.

43. A method according to claim 41, further comprising customizing at least one surface property of the laminate from the group of surface properties consisting of cleanliness, biocompatibility, surface energy, binding affinity,

porosity, chemical interaction, chemical addition, sample information encoding, and tracking.

44. A method according to claim 9, wherein the step of dispensing includes limiting each droplet to a specified volume smaller than one microliter.

45. A method of high throughput processing of a plurality of droplets, the method comprising:

- a) hanging each droplet from a dispenser;
- b) bringing each droplet into momentary contact with a moving surface having a probe, such that each droplet is deposited onto the probe through surface attraction;
- c) applying an alternating current to the probe so as to cause the probe to vibrate such that each droplet is atomized; and
- d) analyzing a characteristic of each droplet.

46. A method of high throughput processing of a plurality of droplets, the method comprising:

- a) dispensing each droplet into an enclosed volume, the enclosed volume having an exit channel, the enclosed volume incorporated into a moving conveyor;
- b) heating each droplet in the enclosed volume such that the expansion of the droplet causes it to be ejected through the exit channel in the form of an atomized spray; and
- c) analyzing a characteristic of the atomized spray by means of mass spectrometry.

47. A method for high throughput processing of a plurality of droplets, the method comprising:

- a) spooling a laminate onto a moving surface;
- b) dispensing each droplet onto the laminate; and
- c) performing on each droplet at least one operation from the group of operations consisting of mixing, diluting, concentration, heating, cooling, humidifying, filtering, and analyzing.

48. A method according to claim 47 wherein the step of spooling includes depositing the laminate onto a conveyor belt.

49. A method according to claim 48, further comprising spooling the laminate off the moving surface.

50. A method according to claim 49, further comprising:

- a) cleaning the laminate; and
- b) repeating the steps of spooling the laminate onto the moving surface, dispensing, performing on each droplet at least one operation, and spooling the laminate off the moving surface.

51. A method according to claim 49, further comprising disposing the laminate.

52. A method according to claim 47, further comprising customizing at least one surface property of the laminate from the group of surface properties consisting of cleanliness, biocompatibility, surface energy, binding affinity, porosity, chemical interaction, chemical addition, sample information encoding, and tracking.

53. A method according to claim 47, wherein the laminate is magnetic and the droplet includes magnetized particles.

54. A method according to claim 47, further comprising subjecting each droplet to a controlled environment.

55. A method according to claim 54, wherein subjecting the at least one droplet to a controlled environment includes hanging the droplet from the laminate for at least a specified