leading to the retrieval of sample fluid from the swab **30**. The dimensions of the extraction chamber **23** are selected so that, when the lid **24** is closed upon the inserted swab **30**, the foam/sponge head **32** is compressed to effectively release the fluid sample into the extraction chamber **23** and, at the same time, seal off any passage through which sample might flow in reverse. Also, when the lid **24** is fully closed and the swab head **32** is compressed, the head is in a tilted position that forces the retrieved fluid sample to drain off the head as defined droplets with limited bubble content. The retrieved fluid sample then passes from the extraction chamber **23**, through a duct **53**, into a draining chamber **54** that sits directly beneath the extraction chamber **23** and directly above the fluidic chip **26**. In situations where excessive amounts of fluid are retrieved from the swab head **32**, overflow reservoirs **55** adjacent to the extraction chamber **23** may capture any excess fluid present, preventing this fluid from draining through the duct **53**. If desired, the configuration of the cartridge **11** may be easily modified so that a portion of a retrieved fluid sample may be routinely retained, without risk of cross-contamination, permitting further analysis of the sample in a laboratory at a later time.

[0090] Referring to FIGS. **5***a* & **5***b*, the size and shape of the extraction chamber **23** is a determinant of the efficiency with which a fluid sample can be retrieved from a swab head **32** as well as of the efficiency with which the chamber **23** can be sealed against reverse fluid flow. Extraction efficiency can be enhanced where the extraction chamber **23** is equipped with a cavity that provides for the tightest possible confinement of the swab head **32**. For example, in the uncompressed state, a typical, cylindrically shaped swab head **32** may have dimensions of 13 mm in diameter and 20 mm in length. In such a case, the dimensions of the cylindrical cavity inside the extraction chamber **23** could be set to between about 15 and about 20 mm in length and between about 4 mm and 8 mm in diameter to facilitate achieving effective retrieval of fluids with viscosities ranging between 1 and 20 cp. We have found that the angle at which the swab head **32** is tilted is generally a determinant of the efficiency with which droplets of retrieved fluid sample can form. In one example, by tilting the extraction chamber **26** at an angle of thirty degrees with respect to the vertical, retrieved fluids can routinely form droplets. The size and shape of the draining duct **53** may be a determinant of the efficiency with which a fluid sample can be retrieved from a swab head **32** and of the rate at which the retrieved fluid can pass from the extraction chamber **23** into the draining chamber **54**. By using a duct with dimensions of about 10 mm to about 15 mm in length and about 1 mm and about 3 mm in width, efficient draining of retrieved fluid samples with viscosities ranging between about 1 cp and about 20 cp can be routinely achieved.

[0091] Referring to FIG. **5***c*, an alternative extraction chamber **501** is shown standing upright with a hinged lid **502** in an open position. The extraction chamber **501** is for use with a swab **504**, whereby the foam head **506** is attached to a rigid or semi-rigid support **505** with a shape similar to the cross section of the foam head and a footprint equal or greater than the attached side of the foam head. Upon insertion of the swab **504** into the extraction chamber **501**, sample fluid is retrieved from the swab **504** by a full compression of the foam head **506**. Retrieved sample fluid passes through a duct **507** in the base of the cylindrical inlet **503** into the draining chamber **44** of the cartridge. Upon removal of the swab the hinged lid **502** is moved into closed position to seal the inlet cavity against reverse fluid flow.

[0092] The size and shape of the extraction chamber **501** may be a determinant of the efficiency with which a fluid sample can be retrieved from a swab head **506** as well as of the efficiency with which the chamber **501** can be sealed against reverse fluid flow. In various embodiments, extraction efficiency can be enhanced where the extraction chamber **501** is equipped with a cylindrical inlet cavity **503** that seals tightly around the foam head support **505** and provides for the tightest possible confinement of the foam head **506** upon insertion of the swab **504**. For example, in the uncompressed state, a typical cylindrically-shaped swab head **506** may have dimensions of 13 mm in diameter and 20 mm in length with a round foam head support 1 mm in height and 13 mm in diameter. In such a case, the dimensions of the cylindrical inlet cavity **503** inside the extraction chamber **501** could be set to 10 in depth and 13 mm in diameter to facilitate achieving effective retrieval of fluids with viscosities ranging between 1 and 20 cp.

[0093] The size and shape of the draining duct **507** is a determinant of the efficiency with which a fluid sample can be retrieved from a swab head **504** and of the rate at which the retrieved fluid can pass from the extraction chamber **501** into the draining chamber **54**. By using a duct with dimensions of 13 mm in length and 3 mm in width, efficient draining of retrieved fluid samples with viscosities ranging between 1 and 20 cp can be routinely achieved.

[0094] Referring to FIG. **5***d*, an extraction chamber **511** is shown standing upright with a hinged lid **512** in open position. The extraction chamber **511** is for use with a swab **514**, whereby the foam head **516** is attached to a rigid or semi rigid support **515** with a shape similar to the cross section of the foam head and a footprint equal or greater than the attached side of the foam head. Upon insertion of the swab **514** into the extraction chamber, **511** sample fluid is retrieved from the swab **514** by a full compression of the foam head **516**. Retrieved sample fluid passes through duct **517** in the base of the cuboid inlet, **513** into the draining chamber **44** of the cartridge**11**. Upon removal of the swab the hinged lid **512** is moved into closed position to seal of the inlet cavity against reverse fluid flow.

[0095] The size and shape of the extraction chamber **511** may be a determinant of the efficiency with which a fluid sample can be retrieved from a swab head **516** as well as of the efficiency with which the chamber **511** can be sealed against reverse fluid flow. In various embodiments, extraction efficiency can be enhanced where the extraction chamber **511** is equipped with a cuboid inlet cavity **513** that seals tightly around the foam head support **515** and provides for the tightest possible confinement of the foam head **516** upon insertion of the swab **514**. For example, in the uncompressed state, a typical cuboid shaped swab head **516** may have dimensions of 20 mm in length, 3 mm in width and 25 mm in height with a flat foam head support of 21 mm in length, 4 mm in width and 1 mm in height. In such a case, the dimensions of the cuboid inlet cavity **513** inside the extraction chamber **511** could be set to 21 mm in length, 4 mm in width and 17 mm in height to facilitate achieving effective retrieval of fluids with viscosities ranging between 1 and 20 cp.

[0096] The size and shape of the draining duct **517** may be a determinant of the efficiency with which a fluid sample can be retrieved from a swab head **514** and of the rate at which the