water passageway **22** has a larger diameter than the additive passageway **24**. In the embodiment of FIG. **3**, however, the relative sizes of the diameters of the water passageway **22** and additive passageway **24** are not critical because flow regulator **38**, **40** controls the flow rate in passageways **22**, **24** respectively and thereby create the desired proportions of water **30** and additive **32**. The first tube **14** connects the first container **12** to the water passageway **22** of the manifold and the second tube **18** connects the second container **16** to the additive passageway **24**. The combination of the first tube **14** and water passageway **22** define a water channel and the combination of the second tube **18** and the additive passageway **24** define an additive channel. An outlet tube **42** has one end connected to the mixing passageway **46** of the manifold. The other end of outlet tube **42** may optionally be connected to a bite valve **44**.

A check valve **26** is disposed in the water channel, preferably adjacent the manifold **20**. Check valve **26** prevents reflux of water and/or water and additive mixture into the first tube **14** and the water **30** in container **12**. Similarly, a check valve **28** is disposed in the additive channel, preferably adjacent the manifold **20**, to prevent reflux into the additive container **16**.

An adjustable flow regulator **38**, **40** controls flow in the water passageway **22** and the additive passageway **24**. In the embodiment of FIG. **3**, adjustable flow regulator **38**, **40** comprises a pair of independently operated threaded valves that can be rotated to fully open (full flow) or completely block (no flow) the water and additive passageways **22**, **24**. In addition, the adjustable flow regulator **38**, **40** is infinitely adjustable between full flow and no flow. Another embodiment of a flow regulator (not shown) comprises a single spool valve or similar type valve to control flow through the two passageways **22**, **24**. In this embodiment, pushing in the valve would open the water passageway only, a further push would open both the water and additive passageways.

Additive **32** in container **16** may be a liquid, solid or gel. An exemplary, but not exhaustive, list of additives includes a beverage, a beverage concentrate, electrolytes, flavorings, carbohydrates, vitamins, aspirates, medications and dietary supplements. In the embodiment shown in FIG. **2**, the additive container **16** is attached to the first tube **14** by a hook connector **48** extending from the base of container **16**. Additive container **16** may be located further from manifold **20** by extending the tube **18**.

It is contemplated that additive container **16** will not be reused. That is, a plurality of additive containers **16** containing different additives are available and can be connected to and disconnected from the apparatus **10**, depending on the additive that is needed. When the additive **32** is depleted, or it is desired to use another additive, the additive container **16** is detached and another additive container is attached. In one embodiment, the tube **18** is removably connected to the additive container **16**. Such removable connections are known in the art and include, for example, barb connections, screw on connections (e.g., Leur lock, threaded) or connectors that use push-on type connections. In another embodiment, the tube **18** is permanently connected to additive container **16** and removably connected to manifold **20**. With the exception of water **30** and additive **32**, all the components of apparatus **10** may be made of known plastic materials.

To use apparatus **10**, an individual sucks on the optional bite valve **44** to draw water **30** and additive **32** into mixing passageway **46** and outlet tube **42**. In the embodiment of FIGS. **1-3**, flow through either the water passageway **22** or additive passageway **24** is controlled by adjustable flow regulator **38**, **40**. When both passageways **22**, **24** are open, the act of sucking on the bite valve **44** simultaneously draws fluid from both containers **12**, **16**. Assuming additive **32** is a flavoring, then a flavored drink is automatically produced when the additive **32** and water **30** mix in the mixing passageway **46** of the manifold **20**. The resulting drink mix travels through the outlet tube **42** and the bite valve **44**. The concentration of additive **32** in the drink mix may be altered by adjusting flow regulator **38**, **40**.

The connectors used to fix tubes **14**, **18** to manifold **20** are shown in the Figs. as barb connectors, however, other connectors may be used, such as connectors that screw on (e.g., Luer lock, threaded) or connectors that use push-on type connections.

FIGS. **4-6** are sectional views of second, third and fourth embodiments of a manifold. FIG. **4** shows a manifold **50** that is different from manifold **20** in two ways. First, flow regulator **40** has been deleted and second, a restrictive orifice **52** has been added in the additive channel, preferably adjacent the manifold **50**. Orifice **52** functions as a nonadjustable flow regulator for the additive channel. Different sized orifices **52** may be used, depending on the viscosity and the amount of additive desired to be mixed with water **30**.

FIG. **5** shows a manifold **60** that is identical to manifold **20** except that flow regulator **38** has been deleted. The proportion of additive **32** to water **30** is controlled by flow regulator **40** in the additive passageway **24**. FIG. **6** shows a manifold **70** that is similar to manifold **50** of FIG. **4** except that flow regulator **38** has been deleted. Flow regulation in manifold **70** is accomplished by a restrictive orifice **52** in the additive channel, the orifice **52** preferably being located adjacent the manifold **70**.

In the embodiment of FIG. **6**, the ratio of additive **32** to water **30** is dictated by the volumetric flow rate through each passageway **22**, **24**. The flow rates are dependent upon the fluid viscosity of the water **30** and additive **32** and the fluidic resistance of passageways **22**, **24**; tubes **14**, **18**; check valves **26**, **28**; and restrictive orifice **52**. Because the flow rates in manifold **70** are fixed for a given additive **32**, manifold **70** has the advantage of maintaining a fixed concentration of additive to water for a given assembly. On the other hand, it is contemplated that the user may desire to change from a low viscosity additive (such as an electrolyte) to a higher viscosity additive (such as a carbohydrate) and mix the new additive with water at a different ratio. In such a case, a different size restrictive orifice may be used in combination with the new additive to create the fluidic resistance necessary to obtain the desired concentration of the new additive to water.

While the invention has been described with reference to certain preferred embodiments, numerous changes, alterations and modifications to the described embodiments are possible without departing from the spirit and scope of the invention, as defined in the appended claims and equivalents thereof.

What is claimed is:

1. A personal water and additive apparatus, comprising:

a non-pressurized first container capable of holding liquid;

a manifold having a water passageway and an additive passageway, the water passageway and additive passageway intersecting to form a single mixing passageway;

a first tube connecting the first container to the water passageway of the manifold, the combination of the first tube and the water passageway defining a water channel;

a non-pressurized second container capable of holding liquid, the second container having a volume less than half a volume of the first container;