19. The cartridge of claim 1, wherein the first portion includes a surface arranged to accommodate piercing to form an inlet through which fluid is provided to activate the gas source and an outlet through which gas exits the container for dissolving in the precursor liquid, the first portion being attached to the second portion such that the surface is unexposed.

20. A cartridge for use by a beverage making machine in forming a beverage, comprising:

first and second portions that are attached together and separated from each other by an impermeable barrier, the first portion containing a gas source for emitting a gas to be dissolved in a beverage precursor liquid, the second portion containing a beverage medium for mixing with a precursor liquid to form a beverage, the cartridge having a plane where the first portion is located below the plane and the second portion is located above the plane,

wherein the first portion is arranged to interact with a beverage making machine to activate the gas source to release gas dissolved by the beverage making machine into precursor liquid and second portion is arranged to interact with a beverage making machine to provide beverage medium for mixing with a precursor liquid to form a beverage.

21. The cartridge of claim 20, wherein the first portion is arranged to have an inlet through which fluid is provided to activate the gas source and an outlet through which gas exits the first portion for dissolving in the precursor liquid.

22. The cartridge of claim 20, wherein the second portion is arranged to have an outlet through which the beverage medium exits the container for mixing with the precursor liquid.

23. The cartridge of claim 20, wherein the second portion is defined, at least in part, by a wall that is movable to expel beverage medium from the second portion.

24. The cartridge of claim 23, wherein the wall includes a layer of barrier material.

25. The cartridge of claim 20, wherein the second portion is defined by a capsule formed by a layer of barrier material.

26. The cartridge of claim 25, wherein the layer of barrier material is arranged to open and allow beverage medium to exit the second portion when a force is applied to the barrier material.

27. The cartridge of claim 20, wherein the gas source is a charged zeolite.

28. The cartridge of claim 20, wherein the first portion is defined by a capsule formed by a layer of barrier material, and the second portion is defined by a capsule formed by a layer of barrier material, and the first and second portions are attached together.

29. The cartridge of claim 20, wherein the first and second portions are sealed from an exterior environment and the first portion contains a carbon dioxide source in solid form arranged to emit carbon dioxide gas for use in mixing with a beverage precursor liquid to form a beverage.

30. The cartridge of claim 20, wherein the first portion is sealed from an exterior environment and a pressure in the first portion prior to breaking the seal of the first portion is less than 100 psi.

31. The cartridge of claim 20, wherein the gas source is arranged to emit gas suitable for forming a carbonated beverage having a volume of between 100 – 1000 ml and a carbonation level of about 1 to 5.

32. The cartridge of claim 20, wherein the plane is defined by a part of the first or second portion.

33. The cartridge of claim 20, wherein the second portion includes corrugations in a movable wall and a frangible outlet that is openable based on pressure inside the second portion.

34. The cartridge of claim 20, wherein the gas source is contained in a permeable bag in the first portion.

35. The cartridge of claim 20, wherein the first portion includes a surface arranged to accommodate piercing to form an inlet through which fluid is provided to activate the gas source and an outlet through which gas exits the container for dissolving in the precursor liquid, the first portion being attached to the second portion such that the surface is unexposed.

36. A cartridge for forming a beverage, comprising:

a container including first and second portions that are separated from each other, the first portion partially surrounding the second portion and containing a gas source for emitting a gas to be dissolved in a beverage precursor liquid, the second portion containing a beverage medium for mixing with a precursor liquid to form a beverage.

37. The cartridge of claim 36, wherein the container is arranged to have an inlet through which fluid is provided to activate the gas source and an outlet through which gas exits the container for dissolving in the precursor liquid.

38. The cartridge of claim 37, wherein the inlet and outlet are located on a top of the container.

39. The cartridge of claim 36, wherein the container is arranged to have an outlet through which the beverage medium exits the container for mixing with the precursor liquid.

40. The cartridge of claim 36, further comprising a third portion between the first and second portions, the third portion surrounding the second portion and being arranged to receive precursor liquid and beverage medium for mixing the beverage medium and precursor liquid together.

41. The cartridge of claim 36, further comprising a lid that seals a top of the first and second portions closed.

42. The cartridge of claim 41, wherein the lid is piercable by a beverage making machine to form an inlet into the first or second portion.

43. The cartridge of claim 41, further comprising a piercing element coupled to the container and moveable to pierce the lid to form an inlet into the first portion and an inlet into the second portion.

44. The cartridge of claim 43, wherein the piercing element pierces the lid to form an outlet for gas release by the gas source.

45. The cartridge of claim 43, further comprising a third portion between the first and second portions, the third portion surrounding the second portion and being arranged to receive precursor liquid and beverage medium for mixing the beverage medium and precursor liquid together, wherein the piercing element is arranged to pierce the lid to form an inlet into the third portion.

46. The cartridge of claim 45, wherein the piercing element is arranged to introduce precursor liquid into both the second and third portions to cause the beverage medium to mix with the precursor liquid in the third portion.

47. The cartridge of claim 43, further comprising a lock element arranged to prevent movement of the piercing element relative to the container to pierce the lid, wherein the lock element is arranged to be released to allow movement of the piercing element.

48. The cartridge of claim 47, wherein the lock element includes a ring portion or tab portion that is removable from the piercing element or container to release the lock element.

49. The cartridge of claim 36, wherein the second portion includes an outlet closure that opens to release beverage medium in the presence of a pressure above a threshold.

50. The cartridge of claim 36, wherein the second portion includes an outlet closure that is removable by a force external to the cartridge.

51. The cartridge of claim 36, wherein the container has a volume that is less than a volume of beverage to be formed using the cartridge.

52. The cartridge of claim 36, wherein the gas source is a charged zeolite.

53. The cartridge of claim 36, wherein the first and second portions are sealed from an exterior environment and the first portion contains a carbon dioxide source in solid form arranged to emit carbon dioxide gas for use in mixing with a beverage precursor liquid to form a beverage.

54. The cartridge of claim 36, wherein the first portion is sealed from an exterior environment and a pressure in the first portion prior to breaking the seal of the first portion is less than 100 psi.

55. A cartridge for forming a beverage, comprising:

a container including first, second and third portions that are separated from each other, the first portion containing a gas source for emitting a gas to be dissolved in a beverage precursor liquid, the second portion containing a beverage medium for use in mixing with a beverage precursor liquid to form a beverage, and the third portion arranged to receive beverage medium from the second portion and receive precursor liquid to mix the precursor liquid with the beverage medium.

56. The cartridge of claim 55, wherein the container is arranged to have an inlet through which fluid is provided to activate the gas source and an outlet through which gas exits the container for dissolving in the precursor liquid.

57. The cartridge of claim 56, wherein the inlet and outlet are located on a top of the container.

58. The cartridge of claim 55, wherein the container is arranged to have an outlet from the second portion through which the beverage medium enters the third portion for mixing with the precursor liquid.

59. The cartridge of claim 58, wherein the outlet from the second portion has a closure that is opened by pressure in the second portion.

60. The cartridge of claim 55, further comprising a lid that seals a top of the first, second and third portions closed.

61. The cartridge of claim 60, wherein the lid is piercable by a beverage making machine to form an inlet into the first or second or third portion.

62. The cartridge of claim 60, further comprising a piercing element coupled to the container and moveable to pierce the lid to form an inlet into the first portion and an inlet into the second portion.

63. The cartridge of claim 62, wherein the piercing element pierces the lid to form an outlet for gas release by the gas source.

64. The cartridge of claim 62, wherein the piercing element is arranged to pierce the lid to form an inlet into the third portion to admit precursor liquid into the third portion.

65. The cartridge of claim 64, wherein the piercing element is arranged to introduce precursor liquid into both the second and third portions to cause the beverage medium to mix with the precursor liquid in the third portion.

66. The cartridge of claim 62, further comprising a lock element arranged to prevent movement of the piercing element relative to the container to pierce the lid, wherein the lock element is arranged to be released to allow movement of the piercing element.

67. The cartridge of claim 66, wherein the lock element includes a ring portion or tab portion that is removable from the piercing element or container to release the lock element.

68. The cartridge of claim 55, wherein the third portion surrounds the first and second portions.

69. The cartridge of claim 55, wherein the container has a volume that is less than a volume of beverage to be formed using the cartridge.

70. The cartridge of claim 55, wherein the gas source is a charged zeolite.

71. The cartridge of claim 55, wherein the first and second portions are sealed from an exterior environment and the first portion contains a carbon dioxide source in solid form arranged to emit carbon dioxide gas for use in mixing with a beverage precursor liquid to form a beverage.

72. The cartridge of claim 55, wherein the second portion includes a movable element that is movable to force beverage medium from the second portion into the third portion.

73. The cartridge of claim 72, wherein the movable element includes a layer of barrier material.

74. The cartridge of claim 73, wherein the second portion is defined by a capsule formed by a layer of barrier material.

75. The cartridge of claim 74, wherein the layer of barrier material is arranged to open and allow beverage medium to enter the third portion when a force is applied to the second portion.

76. The cartridge of claim 55, wherein the second portion is positioned over the third portion, and the first portion surrounds at least a part of the third portion.

77. The cartridge of claim 55, wherein the third portion includes a funnel shape.

78. The cartridge of claim 55, wherein the first portion is sealed from an exterior environment and a pressure in the first portion prior to breaking the seal of the first portion is less than 100 psi.

79. The cartridge of claim 55, wherein the gas source is arranged to emit gas suitable for forming a carbonated beverage having a volume of between 100 – 1000 ml and a carbonation level of about 1 to 5.

80. A cartridge for forming a beverage, comprising:

a container including first and second portions that are separated from each other, the first portion containing a gas source for emitting a gas to be dissolved in a beverage precursor liquid, the second portion containing a beverage medium for use in mixing with a beverage precursor liquid to form a beverage, the first and second portions being closed to an external environment; and

a movable part attached to the container, the movable part being movable relative to the container to open the first and/or second portions for activation of the gas source or emission of gas from the first portion, and/or for introducing liquid into or permitting beverage medium to exit the second portion.

81. The cartridge of claim 80, wherein the movable part is arranged to form an inlet in the container through which fluid is provided to activate the gas source and an outlet through which gas exits the container for dissolving in the precursor liquid.

82. The cartridge of claim 81, wherein the movable part is located at a top of the container, and the inlet and outlet are located on a top of the container.

83. The cartridge of claim 80, wherein the container is arranged to have an outlet from the second portion through which the beverage medium exits for mixing with the precursor liquid.

84. The cartridge of claim 83, wherein the outlet from the second portion has a closure that is opened by pressure in the second portion.

85. The cartridge of claim 80, further comprising a lid that seals a top of the first and second portions closed.

86. The cartridge of claim 85, wherein the lid is piercable by the movable part to form an inlet into the first or second portion.

87. The cartridge of claim 85, wherein the movable part includes a piercing element coupled to the container and moveable to pierce the lid to form an inlet into the first portion and an inlet into the second portion.

88. The cartridge of claim 87, wherein the piercing element pierces the lid to form an outlet of the first portion for gas release by the gas source.

89. The cartridge of claim 87, further comprising a third portion arranged to receive beverage medium from the second portion and to receive precursor liquid for mixing the beverage medium and precursor liquid together, and wherein the piercing element is arranged to pierce the lid to form an inlet into the third portion to admit precursor liquid into the third portion.

90. The cartridge of claim 89, wherein the piercing element is arranged to introduce precursor liquid into both the second and third portions to cause the beverage medium to mix with the precursor liquid in the third portion.

91. The cartridge of claim 80, further comprising a lock element arranged to prevent movement of the movable part relative to the container to open the first and second portions for activation of the gas source or emission of gas from the first portion, and for introducing liquid into or permitting beverage medium to exit the second portion.

92. The cartridge of claim 91, wherein the lock element includes a ring portion or tab portion that is removable from the piercing element or container to release the lock element.

93. The cartridge of claim 80, wherein the second portion includes an outlet closure that is removable by a force external to the cartridge.

94. The cartridge of claim 80, wherein the container has a volume that is less than a volume of beverage to be formed using the cartridge.

95. The cartridge of claim 80, wherein the gas source is a charged zeolite.

96. The cartridge of claim 80, wherein the first and second portions are sealed from an exterior environment and the first portion contains a carbon dioxide source in solid form arranged to emit carbon dioxide gas for use in mixing with a beverage precursor liquid to form a beverage.

97. The cartridge of claim 80, wherein the first portion is sealed from an exterior environment and a pressure in the first portion prior to breaking the seal of the first portion is less than 100 psi.

98. The cartridge of claim 80, wherein the gas source is arranged to emit gas suitable for forming a carbonated beverage having a volume of between 100 – 1000 ml and a carbonation level of about 1 to 5.

99. A cartridge for forming a beverage, comprising:

a container including first and second portions that are separated from each other, the first portion containing a gas source for emitting a gas to be dissolved in a beverage precursor liquid, the second portion containing a beverage medium for use in mixing with a beverage precursor liquid to form a beverage;

a movable part attached to the container, the movable part being movable relative to the container to configure the cartridge for use in forming a beverage; and

a lock element that prevents movement of the movable part to configure the cartridge for use in forming a beverage, the lock element being releasable by a user.

100. The cartridge of claim 99, wherein movement of the movable part relative to the container allows for activation of the gas source or emission of gas from the first portion, and allows for introducing liquid into or permitting beverage medium to exit the second portion.

101. The cartridge of claim 99, wherein movement of the movable part relative to the container forms an inlet in the container through which fluid is providable to activate the gas source and forms an outlet through which gas exits the container for dissolving in the precursor liquid.

102. The cartridge of claim 99, wherein movement of the movable part relative to the container forms an inlet in the container through which precursor liquid is introducible for mixing with the beverage medium.

103. The cartridge of claim 102, wherein the second portion has an outlet with a closure that is opened by pressure in the second portion.

104. The cartridge of claim 99, further comprising a lid that seals a top of the first and second portions closed.

105. The cartridge of claim 104, wherein the lid is piercable by the movable part to form an inlet into the first or second portion.

106. The cartridge of claim 104, wherein the movable part includes a piercing element moveable to pierce the lid to form an inlet into the first portion and an inlet into the second portion.

107. The cartridge of claim 106, wherein the piercing element pierces the lid to form an outlet of the first portion for gas release by the gas source.

108. The cartridge of claim 106, further comprising a third portion arranged to receive beverage medium from the second portion and to receive precursor liquid for mixing the beverage medium and precursor liquid together, and wherein the piercing element is arranged to pierce the lid to form an inlet into the third portion to admit precursor liquid into the third portion.

109. The cartridge of claim 108, wherein the piercing element is arranged to introduce precursor liquid into both the second and third portions to cause the beverage medium to mix with the precursor liquid in the third portion.

110. The cartridge of claim 106, wherein the lock element is arranged to prevent movement of the piercing element relative to the lid.

111. The cartridge of claim 99, wherein the lock element includes a ring portion or tab portion that is removable from the movable part to release the lock element.

112. The cartridge of claim 99, wherein the second portion includes an outlet closure that is removable by a force external to the cartridge to permit beverage medium to exit the second portion.

113. The cartridge of claim 99, wherein the container has a volume that is less than a volume of beverage to be formed using the cartridge.

114. The cartridge of claim 99, wherein the gas source is a charged zeolite.

115. The cartridge of claim 99, wherein the first and second portions are sealed from an exterior environment and the first portion contains a carbon dioxide source in solid form arranged to emit carbon dioxide gas for use in mixing with a beverage precursor liquid to form a beverage.

116. The cartridge of claim 99, wherein the first portion is sealed from an exterior environment and a pressure in the first portion prior to breaking the seal of the first portion is less than 100 psi.

117. The cartridge of claim 99, wherein the gas source is arranged to emit gas suitable for forming a carbonated beverage having a volume of between 100 – 1000 ml and a carbonation level of about 1 to 5.

118. A cartridge for forming a beverage, comprising:

a container including first, second and third portions that are separated from each other, the first portion containing a gas source for emitting a gas to be dissolved in a beverage precursor liquid, the second portion containing a beverage medium for use in mixing with a beverage precursor liquid to form a beverage, and the third portion arranged to receive beverage medium from the second portion and receive precursor liquid to mix the precursor liquid with the beverage medium;

wherein the cartridge is arranged to receive a first portion of precursor liquid into the second portion to mix with the beverage medium so that the mixed first portion of precursor liquid and beverage medium enters the third portion, and the cartridge is arranged to receive a second portion of precursor liquid directly into the third portion for mixing with the mixed first portion of precursor liquid and beverage medium in the third portion.

119. The cartridge of claim 118, wherein the container is arranged to have an inlet through which fluid is provided to activate the gas source and an outlet through which gas exits the container for dissolving in the precursor liquid.

120. The cartridge of claim 119, wherein the inlet and outlet are located on a top of the container and are a same opening.

121. The cartridge of claim 118, wherein the container is arranged to have an outlet from the second portion through which the beverage medium enters the third portion for mixing with the precursor liquid.

122. The cartridge of claim 121, wherein the outlet from the second portion has a closure that is opened by pressure in the second portion.

123. The cartridge of claim 118, further comprising a lid that seals a top of the first, second and third portions closed.

124. The cartridge of claim 123, wherein the lid is piercable by a beverage making machine to form an inlet into the first or second or third portion.

125. The cartridge of claim 123, further comprising a piercing element coupled to the container and moveable to pierce the lid to form an inlet into the first portion and an inlet into the second portion.

126. The cartridge of claim 125, wherein the piercing element pierces the lid to form an outlet for gas release by the gas source.

127. The cartridge of claim 125, wherein the piercing element is arranged to pierce the lid to form an inlet into the third portion to admit precursor liquid directly into the third portion.

128. The cartridge of claim 127, wherein the piercing element is arranged to introduce precursor liquid into both the second and third portions to cause the beverage medium to mix with the precursor liquid in the third portion.

129. The cartridge of claim 125, further comprising a lock element arranged to prevent movement of the piercing element relative to the container to pierce the lid, wherein the lock element is arranged to be released to allow movement of the piercing element.

130. The cartridge of claim 129, wherein the lock element includes a ring portion that is removable from the piercing element or container to release the lock element.

131. The cartridge of claim 118, wherein the second portion is surrounded by the third portion, and the third portion includes a funnel shape.

132. The cartridge of claim 118, wherein the container has a volume that is less than a volume of beverage to be formed using the cartridge.

133. The cartridge of claim 118, wherein the gas source is a charged zeolite.

134. The cartridge of claim 118, wherein the first and second portions are sealed from an exterior environment and the first portion contains a carbon dioxide source in solid form arranged to emit carbon dioxide gas for use in mixing with a beverage precursor liquid to form a beverage.

135. The cartridge of claim 118, wherein the first portion is positioned around the third portion, and the third portion is positioned around the second portion.

136. The cartridge of claim 118, wherein the first portion is sealed from an exterior environment and a pressure in the first portion prior to breaking the seal of the first portion is less than 100 psi.

137. The cartridge of claim 118, wherein the gas source is arranged to emit gas suitable for forming a carbonated beverage having a volume of between 100 – 1000 ml and a carbonation level of about 1 to 5.

138. A cartridge for forming a beverage, comprising:

a container including beverage medium portion and a mixing chamber portion that are separated from each other, the beverage medium portion containing a beverage medium for

use in mixing with a beverage precursor liquid to form a beverage, the mixing chamber portion being constructed and arranged for mixing the beverage medium with a precursor liquid to form a beverage, the mixing chamber portion arranged to have multiple inlets for receiving precursor liquid into the mixing chamber portion.

139. The cartridge of claim 138, further comprising a gas source portion containing a gas source for emitting a gas to be dissolved in precursor liquid.

140. The cartridge of claim 139, wherein the container is arranged to have an inlet through which fluid is provided to activate the gas source and an outlet through which gas exits the container for dissolving in the precursor liquid.

141. The cartridge of claim 140, wherein the inlet and outlet are located on a top of the container.

142. The cartridge of claim 138, further comprising a lid that seals a top of the beverage medium portion and the mixing chamber portion closed.

143. The cartridge of claim 142, wherein the lid is piercable by a beverage making machine to form the multiple inlets into the mixing chamber portion.

144. The cartridge of claim 142, further comprising a piercing element coupled to the container and moveable to pierce the lid to form the multiple inlets into the mixing chamber portion.

145. The cartridge of claim 144, wherein the piercing element pierces the lid to form an inlet into the beverage medium portion to introduce precursor liquid into the beverage medium portion.

146. The cartridge of claim 138, wherein the mixing chamber portion surrounds the beverage medium portion.

147. The cartridge of claim 138, wherein the mixing chamber portion is located below the beverage medium portion.

148. The cartridge of claim 138, wherein the beverage medium portion includes an outlet closure that opens to release beverage medium in the presence of a pressure above a threshold in the beverage medium portion.

149. The cartridge of claim 138, wherein the beverage medium portion includes an outlet closure that is openable by a force external to the cartridge.

150. The cartridge of claim 138, wherein the mixing chamber portion includes a funnel shape.

151. The cartridge of claim 138, wherein the inlets into the mixing chamber portion are located adjacent to outlets of the beverage medium portion from which beverage medium enters the mixing chamber portion.

152. The cartridge of claim 138, wherein the beverage medium portion includes a wall that is movable to expel beverage medium from the beverage medium portion and into the mixing chamber portion.

153. The cartridge of claim 152, wherein the wall includes a layer of barrier material.

154. The cartridge of claim 152, wherein the beverage medium portion is defined by a capsule formed by a layer of barrier material.

155. The cartridge of claim 154, wherein the layer of barrier material is arranged to open and allow beverage medium to exit the second portion when a force is applied to the barrier material.

156. The cartridge of claim 155, wherein the cartridge includes an piercing element that opens the second portion when a force is applied to the barrier material.

157. The cartridge of claim 138, wherein the container has a volume that is less than a volume of beverage to be formed using the cartridge.

158. The cartridge of claim 138, further comprising a gas source portion containing a gas source for emitting a gas to be dissolved in precursor liquid, wherein the gas source is a charged zeolite.

159. The cartridge of claim 158, wherein the gas source portion is sealed from an exterior environment and the gas source portion contains a carbon dioxide source in solid form arranged to emit carbon dioxide gas for use in mixing with a beverage precursor liquid to form a beverage.

160. The cartridge of claim 138, further comprising a gas source portion containing a gas source for emitting a gas to be dissolved in precursor liquid, wherein the gas source portion is sealed from an exterior environment and a pressure in the gas source portion prior to breaking the seal of the first portion is less than 100 psi.

161. A cartridge for forming a beverage, comprising:

a container including first and second portions that are separated from each other, the first portion containing a gas source for emitting a gas through a gas outlet of the container to be dissolved in a beverage precursor liquid, the second portion containing a beverage medium for mixing with a precursor liquid to form a beverage, the beverage medium exiting the container via a beverage medium outlet,

wherein the gas outlet and the beverage medium outlet are located on a same side of the container.

162. The cartridge of claim 161, wherein the container has an activator inlet through which fluid is provided to activate the gas source and wherein the activator inlet is on a same side of the container as the gas outlet and the beverage medium outlet.

163. The cartridge of claim 161, wherein the container has a precursor liquid inlet through which precursor liquid is introduced into the container for mixing with the beverage medium, wherein the precursor liquid inlet is located on a same side of the container as the gas outlet and the beverage medium outlet.

164. The cartridge of claim 163, wherein the container has an activator inlet through which fluid is provided to activate the gas source and wherein the activator inlet is on a same

side of the container as the gas outlet, the beverage medium outlet and the precursor liquid inlet.

165. The cartridge of claim 164, wherein the gas outlet, the beverage medium outlet, the activator inlet and the precursor liquid inlet are located on a bottom side of the container.

166. The cartridge of claim 161, wherein the second portion is arranged to allow beverage medium to be forced out of the second portion and through the beverage medium outlet by a force external to the cartridge.

167. The cartridge of claim 166, wherein the second portion is defined, at least in part, by a flexible pouch arranged to permit squeezing of the pouch to force beverage medium through the beverage medium outlet.

168. The cartridge of claim 161, wherein the container has a precursor liquid inlet through which precursor liquid is introduced into the second portion for mixing with the beverage medium, the precursor liquid inlet including a perforated conduit extending into the second portion arranged to introduce precursor liquid into the second portion at multiple locations along the conduit.

169. The cartridge of claim 161, wherein the container includes a pair of opposed barrier layers that are joined together to form the first and second portions.

170. The cartridge of claim 169, wherein the container includes an insert that defines the gas outlet and the beverage medium outlet and is attached to the barrier layers.

171. The cartridge of claim 169, wherein the barrier layers are joined together in a pattern to define a filter in the first portion.

172. The cartridge of claim 171, wherein the gas source includes particles of a charged zeolite, and the filter is arranged to resist movement of the particles from a gas source part of the first portion to a gas outlet part of the first portion.

173. The cartridge of claim 172, wherein the gas outlet includes a conduit that extends from the gas outlet, through the gas source part of the first portion, through the filter and into the gas outlet part of the first portion.

174. The cartridge of claim 173, wherein the conduit includes a conduit filter to filter gas output from the gas outlet part to the gas outlet.

175. The cartridge of claim 169, wherein the barrier layers include a flexible foil laminate.

176. The cartridge of claim 161, wherein the gas outlet and beverage medium outlet are closed and are piercable to open the gas outlet and the beverage medium outlet.

177. The cartridge of claim 161, wherein the gas outlet and beverage medium outlet each include an outlet closure that is removable by a force external to the cartridge.

178. The cartridge of claim 161, wherein the container has a volume that is less than a volume of beverage to be formed using the cartridge.

179. The cartridge of claim 161, wherein the first and second portions are sealed from an exterior environment and the first portion contains a carbon dioxide source in solid form arranged to emit carbon dioxide gas for use in mixing with a beverage precursor liquid to form a beverage.

180. The cartridge of claim 161, wherein the first portion is sealed from an exterior environment and a pressure in the first portion prior to breaking the seal of the first portion is less than 100 psi.

181. A cartridge for forming a beverage, comprising:

a container including first and second portions that are separated from each other, the first portion containing a gas source for emitting a gas through a gas outlet of the container to be dissolved in a beverage precursor liquid, the second portion containing a beverage medium for mixing with a precursor liquid to form a beverage and having a precursor liquid inlet for

introducing precursor liquid into the second portion and a beverage medium outlet through which mixed beverage medium and precursor liquid exit the second portion,

wherein the precursor liquid inlet includes a conduit with multiple openings extending into the second portion arranged to introduce precursor liquid into the second portion at multiple locations along the conduit.

182. The cartridge of claim 181, wherein the container has an activator inlet through which fluid is provided to activate the gas source.

183. The cartridge of claim 181, wherein the precursor liquid inlet is located on a same side of the container as the gas outlet and the beverage medium outlet.

184. The cartridge of claim 183, wherein the container has an activator inlet through which fluid is provided to activate the gas source and wherein the activator inlet is on a same side of the container as the gas outlet, the beverage medium outlet and the precursor liquid inlet.

185. The cartridge of claim 184, wherein the gas outlet, the beverage medium outlet, the activator inlet and the precursor liquid inlet are located on a bottom side of the container.

186. The cartridge of claim 181, wherein the second portion is arranged to allow beverage medium to be forced out of the second portion and through the beverage medium outlet by a force external to the cartridge.

187. The cartridge of claim 186, wherein the second portion is defined, at least in part, by a flexible pouch arranged to permit squeezing of the pouch to force beverage medium through the beverage medium outlet.

188. The cartridge of claim 181, wherein the container includes a pair of opposed barrier layers that are joined together to form the first and second portions.

189. The cartridge of claim 188, wherein the container includes an insert that defines the gas outlet and the beverage medium outlet and is attached to the barrier layers.

190. The cartridge of claim 188, wherein the barrier layers are joined together in a pattern to define a filter in the first portion.

191. The cartridge of claim 190, wherein the gas source includes particles of a charged zeolite, and the filter is arranged to resist movement of the particles from a gas source part of the second portion to a gas outlet part of the second portion.

192. The cartridge of claim 191, wherein the gas outlet includes a conduit that extends from the gas outlet, through the gas source part of the second portion, through the filter and into the gas outlet part of the second portion.

193. The cartridge of claim 192, wherein the conduit includes a conduit filter to filter gas output from the gas outlet part to the gas outlet.

194. The cartridge of claim 188, wherein the barrier layers include a flexible foil laminate.

195. The cartridge of claim 181, wherein the gas outlet and beverage medium outlet are closed and are piercable to open the gas outlet and the beverage medium outlet.

196. The cartridge of claim 181, wherein the gas outlet and beverage medium outlet each include an outlet closure that is removable by a force external to the cartridge.

197. The cartridge of claim 181, wherein the container has a volume that is less than a volume of beverage to be formed using the cartridge.

198. The cartridge of claim 181, wherein the first and second portions are sealed from an exterior environment and the first portion contains a carbon dioxide source in solid form arranged to emit carbon dioxide gas for use in mixing with a beverage precursor liquid to form a beverage.

199. The cartridge of claim 181, wherein the first portion is sealed from an exterior environment and a pressure in the first portion prior to breaking the seal of the first portion is less than 100 psi.

200. A cartridge for forming a beverage, comprising:

a container including first and second portions that are separated from each other, the first portion containing a gas source for emitting a gas through a gas outlet of the container to be dissolved in a beverage precursor liquid, the gas outlet having an outlet conduit that extends from a bottom of the container to near a top of the container, the second portion containing a beverage medium for mixing with a precursor liquid to form a beverage and a beverage medium outlet through which beverage medium exits the second portion.

201. The cartridge of claim 200, wherein the container has an activator inlet through which fluid is provided to activate the gas source.

202. The cartridge of claim 200, wherein the second portion includes a precursor liquid inlet for introducing precursor liquid into the second portion.

203. The cartridge of claim 202, wherein the container has an activator inlet through which fluid is provided to activate the gas source and wherein the activator inlet is on a same side of the container as the gas outlet, the beverage medium outlet and the precursor liquid inlet.

204. The cartridge of claim 203, wherein the gas outlet, the beverage medium outlet, the activator inlet and the precursor liquid inlet are located on a bottom side of the container.

205. The cartridge of claim 200, wherein the second portion is arranged to allow beverage medium to be forced out of the second portion and through the beverage medium outlet by a force external to the cartridge.

206. The cartridge of claim 205, wherein the second portion is defined, at least in part, by a flexible pouch arranged to permit squeezing of the pouch to force beverage medium through the beverage medium outlet.

207. The cartridge of claim 200, wherein the container includes a pair of opposed barrier layers that are joined together to form the first and second portions.

208. The cartridge of claim 207, wherein the container includes an insert that defines the gas outlet and the beverage medium outlet and is attached to the barrier layers.

209. The cartridge of claim 207, wherein the barrier layers are joined together in a pattern to define a filter in the first portion.

210. The cartridge of claim 209, wherein the gas source includes particles of a charged zeolite, and the filter is arranged to resist movement of the particles from a gas source part of the second portion to a gas outlet part of the second portion.

211. The cartridge of claim 210, wherein the gas outlet includes a conduit that extends from the gas outlet, through the gas source part of the second portion, through the filter and into the gas outlet part of the second portion.

212. The cartridge of claim 211, wherein the conduit includes a conduit filter to filter gas output from the gas outlet part to the gas outlet.

213. The cartridge of claim 207, wherein the barrier layers include a flexible foil laminate.

214. The cartridge of claim 200, wherein the gas outlet and beverage medium outlet are closed and are piercable to open the gas outlet and the beverage medium outlet.

215. The cartridge of claim 200, wherein the gas outlet and beverage medium outlet each include an outlet closure that is removable by a force external to the cartridge.

216. The cartridge of claim 200, wherein the container has a volume that is less than a volume of beverage to be formed using the cartridge.

217. The cartridge of claim 200, wherein the first and second portions are sealed from an exterior environment and the first portion contains a carbon dioxide source in solid form arranged to emit carbon dioxide gas for use in mixing with a beverage precursor liquid to form a beverage.

218. The cartridge of claim 200, wherein the first portion is sealed from an exterior environment and a pressure in the first portion prior to breaking the seal of the first portion is less than 100 psi.

219. The cartridge of claim 200, wherein the second portion includes a precursor liquid inlet for introducing precursor liquid into the second portion, and wherein the precursor liquid inlet includes a perforated conduit extending into the second portion arranged to introduce precursor liquid into the second portion at multiple locations along the conduit.

220. A cartridge for forming a beverage, comprising:

a container including first and second portions that are separated from each other, the first portion containing a gas source for emitting a gas through a gas outlet of the container to be dissolved in a beverage precursor liquid, the second portion containing a beverage medium for mixing with a precursor liquid to form a beverage and a beverage medium outlet through which beverage medium exits the second portion,

wherein the container includes a pair of barrier layers that are joined together to form at least a part of first portion, the barrier layers being joined together in a pattern to define a filter in the first portion that separates a gas source part of the first portion from a gas outlet part of the first portion.

221. The cartridge of claim 220, wherein the container has an activator inlet through which fluid is provided to activate the gas source.

222. The cartridge of claim 220, wherein the second portion includes a precursor liquid inlet for introducing precursor liquid into the second portion.

223. The cartridge of claim 222, wherein the container has an activator inlet through which fluid is provided to activate the gas source and wherein the activator inlet is on a same side of the container as the gas outlet, the beverage medium outlet and the precursor liquid inlet.

224. The cartridge of claim 223, wherein the gas outlet, the beverage medium outlet, the activator inlet and the precursor liquid inlet are located on a bottom side of the container.

225. The cartridge of claim 220, wherein the second portion is arranged to allow beverage medium to be forced out of the second portion and through the beverage medium outlet by a force external to the cartridge.

226. The cartridge of claim 225, wherein the second portion is defined, at least in part, by a flexible pouch arranged to permit squeezing of the pouch to force beverage medium through the beverage medium outlet.

227. The cartridge of claim 220, wherein the pair of barrier layers are joined together to form the first and second portions.

228. The cartridge of claim 227, wherein the container includes an insert that defines the gas outlet and the beverage medium outlet and is attached to the barrier layers.

229. The cartridge of claim 220, wherein the pattern includes an array of areas where the barrier layers are bonded together that are separated by regions where the barrier layers are not bonded together.

230. The cartridge of claim 229, wherein the gas source includes particles of a charged zeolite, and the filter is arranged to resist movement of the particles from a gas source part of the second portion to a gas outlet part of the second portion.

231. The cartridge of claim 230, wherein the gas outlet includes a conduit that extends from the gas outlet, through the gas source part of the second portion, through the filter and into the gas outlet part of the second portion.

232. The cartridge of claim 231, wherein the conduit includes a conduit filter to filter gas output from the gas outlet part to the gas outlet.

233. The cartridge of claim 227, wherein the barrier layers include a flexible foil laminate, and the cartridge further comprising a porous filter element attached between the barrier layers to separate a gas storage portion from a gas outlet portion of the first portion of the cartridge.

234. The cartridge of claim 220, wherein the gas outlet and beverage medium outlet are closed and are piercable to open the gas outlet and the beverage medium outlet.

235. The cartridge of claim 220, wherein the gas outlet and beverage medium outlet each include an outlet closure that is openable by a force external to the cartridge.

236. The cartridge of claim 220, wherein the container has a volume that is less than a volume of beverage to be formed using the cartridge.

237. The cartridge of claim 220, wherein the first and second portions are sealed from an exterior environment and the first portion contains a carbon dioxide source in solid form arranged to emit carbon dioxide gas for use in mixing with a beverage precursor liquid to form a beverage.

238. The cartridge of claim 220, wherein the first portion is sealed from an exterior environment and a pressure in the first portion prior to breaking the seal of the first portion is less than 100 psi.

239. The cartridge of claim 220, wherein the second portion includes a precursor liquid inlet for introducing precursor liquid into the second portion, and wherein the precursor liquid inlet includes a perforated conduit extending into the second portion arranged to introduce precursor liquid into the second portion at multiple locations along the conduit.

240. A cartridge for forming a beverage, comprising:

a container including first and second portions that are separated from each other, the first portion containing a gas source for emitting a gas to be dissolved in a beverage precursor liquid and an activator inlet for introducing a fluid into the first portion to activate the gas source to emit gas, the activator inlet including a conduit that directs the fluid to a bottom of the first portion, the second portion containing a beverage medium for use in mixing with a beverage precursor liquid to form a beverage.

241. The cartridge of claim 240, wherein the activator inlet extends from a top of the container to a bottom of the first portion.

242. The cartridge of claim 241, wherein the container is arranged to have a gas outlet through which gas emitted by the gas source exits the first portion, and wherein the activator inlet and the gas outlet are located on a top of the container.

243. The cartridge of claim 240, wherein the container includes a third portion arranged to receive beverage medium from the second portion and receive precursor liquid to mix the precursor liquid with the beverage medium, and wherein the container is arranged to have an outlet from the second portion through which the beverage medium enters the third portion for mixing with the precursor liquid.

244. The cartridge of claim 243, wherein the outlet from the second portion has a closure that is opened by pressure in the second portion.

245. The cartridge of claim 240, further comprising a lid that seals a top of the first portion or second portion closed.

246. The cartridge of claim 245, wherein the lid is piercable by a beverage making machine to form an inlet into the first or second portion.

247. The cartridge of claim 245, further comprising a piercing element coupled to the container and moveable to pierce the lid to form an inlet into the first portion and an inlet into the second portion.

248. The cartridge of claim 247, wherein the piercing element pierces the lid to form an outlet for gas release by the gas source.

249. The cartridge of claim 247, wherein the container includes a third portion arranged to receive beverage medium from the second portion and receive precursor liquid to mix the precursor liquid with the beverage medium, and wherein the piercing element is arranged to pierce the lid to form an inlet into the third portion to admit precursor liquid into the third portion.

250. The cartridge of claim 249, wherein the piercing element is arranged to introduce precursor liquid into both the second and third portions to cause the beverage medium to mix with the precursor liquid in the third portion.

251. The cartridge of claim 247, further comprising a lock element arranged to prevent movement of the piercing element relative to the container to pierce the lid, wherein the lock element is arranged to be released to allow movement of the piercing element.

252. The cartridge of claim 251, wherein the lock element includes a removable element that is removable from the piercing element or container to release the lock element.

253. The cartridge of claim 240, wherein the second portion includes an outlet closure that is removable by a force external to the cartridge.

254. The cartridge of claim 240, wherein the container has a volume that is less than a volume of beverage to be formed using the cartridge.

255. The cartridge of claim 240, wherein the gas source is a charged zeolite.

256. The cartridge of claim 240, wherein the first and second portions are sealed from an exterior environment and the first portion contains a carbon dioxide source in solid form arranged to emit carbon dioxide gas for use in mixing with a beverage precursor liquid to form a beverage.

257. The cartridge of claim 240, wherein the second portion includes a movable element that is movable to force beverage medium from the second portion into the third portion.

258. The cartridge of claim 240, wherein the second portion includes a spiral or other tortuous path that contains beverage medium and is arranged to mix the beverage medium with precursor liquid introduce into the tortuous path.

259. The cartridge of claim 258, wherein the first portion is located over the second portion.

260. The cartridge of claim 240, wherein the first portion is sealed from an exterior environment and a pressure in the first portion prior to breaking the seal of the first portion is less than 100 psi.

261. The cartridge of claim 240, wherein the gas source is arranged to emit gas suitable for forming a carbonated beverage having a volume of between 100 – 1000 ml and a carbonation level of about 1 to 5.

262. A cartridge for forming a beverage, comprising:

a container including first and second portions that are separated from each other, the first portion containing a gas source for emitting a gas to be dissolved in a beverage precursor liquid, the second portion containing a beverage medium for use in mixing with a beverage precursor liquid to form a beverage, the second portion including a precursor liquid inlet for introducing precursor liquid into the second portion and an outlet through which mixed beverage medium and precursor liquid exit the second portion, the second portion including a spiral, helical, zig-zag or other tortuous flowpath containing beverage medium that is mixed with precursor liquid directed from the precursor liquid inlet to the tortuous flowpath.

263. The cartridge of claim 262, wherein the container is arranged to have an activator inlet through which fluid is provided to activate the gas source and a gas outlet through which gas exits the container for dissolving in the precursor liquid.

264. The cartridge of claim 263, wherein the activator inlet and the gas outlet are located on a top of the container.

265. The cartridge of claim 262, wherein the container includes a third portion arranged to receive beverage medium from the second portion to mix the precursor liquid with the beverage medium.

266. The cartridge of claim 265, wherein the outlet from the second portion has a closure that is opened by pressure in the second portion.

267. The cartridge of claim 262, further comprising a lid that seals a top of the first portion or second portion closed.

268. The cartridge of claim 267, wherein the lid is piercable by a beverage making machine to form an inlet into the first or second portion.

269. The cartridge of claim 267, further comprising a piercing element coupled to the container and moveable to pierce the lid to form an inlet into the first portion and an inlet into the second portion.

270. The cartridge of claim 269, wherein the piercing element pierces the lid to form an outlet for gas release by the gas source.

271. The cartridge of claim 269, wherein the container includes a third portion arranged to receive beverage medium from the second portion and receive precursor liquid to mix the precursor liquid with the beverage medium, and wherein the piercing element is arranged to pierce the lid to form an inlet into the third portion to admit precursor liquid into the third portion.

272. The cartridge of claim 271, wherein the piercing element is arranged to introduce precursor liquid into both the second and third portions to cause the beverage medium to mix with the precursor liquid in the third portion.

273. The cartridge of claim 269, further comprising a lock element arranged to prevent movement of the piercing element relative to the container to pierce the lid, wherein the lock element is arranged to be released to allow movement of the piercing element.

274. The cartridge of claim 262, wherein the second portion includes an outlet closure that is removable by a force external to the cartridge.

275. The cartridge of claim 262, wherein the container has a volume that is less than a volume of beverage to be formed using the cartridge.

276. The cartridge of claim 262, wherein the gas source is a charged zeolite.

277. The cartridge of claim 262, wherein the first and second portions are sealed from an exterior environment and the first portion contains a carbon dioxide source in solid form arranged to emit carbon dioxide gas for use in mixing with a beverage precursor liquid to form a beverage.

278. The cartridge of claim 262, wherein the first portion is located over the second portion.

279. The cartridge of claim 262, wherein the first portion is sealed from an exterior environment and a pressure in the first portion prior to breaking the seal of the first portion is less than 100 psi.

280. The cartridge of claim 262, wherein the gas source is arranged to emit gas suitable for forming a carbonated beverage having a volume of between 100 – 1000 ml and a carbonation level of about 1 to 5.

281. The cartridge of claim 262, further comprising a sleeve that covers an outer surface of the first and second portions and connects the first and second portions together.

282. A cartridge for forming a beverage, comprising:

a container including first and second portions that are separated from each other, the first portion containing a gas source for emitting a gas to be dissolved in a beverage precursor liquid, the second portion containing a beverage medium for use in mixing with a beverage precursor liquid to form a beverage, the second portion including an outlet through which beverage medium exits the second portion, wherein the first portion is movable relative to the second portion to force beverage medium to exit the second portion through the outlet of the second portion.

283. The cartridge of claim 282, wherein the container is arranged to have an activator inlet through which fluid is provided to activate the gas source and a gas outlet through which gas exits the container for dissolving in the precursor liquid.

284. The cartridge of claim 283, wherein the activator inlet and the gas outlet are located on a top of the container and have a common opening.

285. The cartridge of claim 282, wherein the container includes a third portion arranged to receive beverage medium from the second portion to mix precursor liquid with the beverage medium.

286. The cartridge of claim 285, wherein the outlet from the second portion has a closure that is opened by pressure in the second portion.

287. The cartridge of claim 282, further comprising a lid that seals a top of the first portion or second portion closed.

288. The cartridge of claim 287, wherein the lid is piercable by a beverage making machine to open an inlet into the first or second portion.

289. The cartridge of claim 282, wherein the second portion includes an outlet closure that is removable by a force external to the cartridge.

290. The cartridge of claim 282, wherein the container has a volume that is less than a volume of beverage to be formed using the cartridge.

291. The cartridge of claim 282, wherein the gas source is a charged zeolite.

292. The cartridge of claim 282, wherein the first and second portions are sealed from an exterior environment and the first portion contains a carbon dioxide source in solid form arranged to emit carbon dioxide gas for use in mixing with a beverage precursor liquid to form a beverage.

293. The cartridge of claim 282, wherein the first portion is located over the second portion.

294. The cartridge of claim 282, wherein the first portion is sealed from an exterior environment and a pressure in the first portion prior to breaking the seal of the first portion is less than 100 psi.

295. The cartridge of claim 282, wherein the gas source is arranged to emit gas suitable for forming a carbonated beverage having a volume of between 100 – 1000 ml and a carbonation level of about 1 to 5.

296. The cartridge of claim 282, wherein the first portion is defined at least in part by a first chamber wall, and the second portion is defined at least in part by a second chamber wall that defines a second space, wherein the first chamber wall is received into the second space and is movable relative to the second chamber wall to expel beverage medium from the second portion of the cartridge.

297. The cartridge of claim 296, wherein the first and second chamber walls have a cup shape and the first chamber wall is received at least partially in the second space defined by the second chamber wall.

298. The cartridge of claim 297, further comprising a third portion arranged to receive precursor liquid and beverage medium from the second portion for mixing the beverage medium and precursor liquid together, wherein the second portion is positioned within the third portion.

299. The cartridge of claim 298, wherein the third portion includes a funnel shape and/or includes vanes, channels or other features to enhance mixing of beverage medium and precursor liquid.

300. The cartridge of claim 298, comprising an inlet into the third portion for receiving precursor liquid.

301. The cartridge of claim 296, wherein the first chamber wall forms a plunger in the second space to force beverage medium to the outlet of the second portion.

302. A cartridge for forming a beverage, comprising:

a container including a first portion containing a gas source for emitting a gas to be dissolved in a beverage precursor liquid; and

a flow controller attached to the container and arranged to control a flow of activation fluid into the cartridge for activating the gas source to emit gas.

303. The cartridge of claim 302, further comprising a second portion containing a beverage medium arranged to be mixed with a liquid precursor to form a beverage.

304. The cartridge of claim 302, wherein the container is arranged to have an inlet through which fluid is provided to activate the gas source and an outlet through which gas exits the container for dissolving in the precursor liquid.

305. The cartridge of claim 304, wherein the inlet and outlet are located on a top of the container.

306. The cartridge of claim 303, wherein the container is arranged to have an outlet through which the beverage medium exits the container for mixing with the precursor liquid.

307. The cartridge of claim 303, further comprising a third portion between the first and second portions, the third portion surrounding the second portion and being arranged to receive precursor liquid and beverage medium for mixing the beverage medium and precursor liquid together.

308 The cartridge of claim 303, further comprising a lid that seals a top of the first and second portions closed.

309. The cartridge of claim 308, wherein the lid is piercable by a beverage making machine to form an inlet into the first or second portion.

310. The cartridge of claim 308, further comprising a piercing element coupled to the container and moveable to pierce the lid to form an inlet into the first portion and an inlet into the second portion.

311. The cartridge of claim 308, wherein the piercing element pierces the lid to form an outlet for gas release by the gas source.

312. The cartridge of claim 308, further comprising a third portion between the first and second portions, the third portion surrounding the second portion and being arranged to receive precursor liquid and beverage medium for mixing the beverage medium and precursor liquid together, wherein the piercing element is arranged to pierce the lid to form an inlet into the third portion.

313. The cartridge of claim 312, wherein the piercing element is arranged to introduce precursor liquid into both the second and third portions to cause the beverage medium to mix with the precursor liquid in the third portion.

314. The cartridge of claim 303, wherein the second portion includes an outlet closure that opens to release beverage medium in the presence of a pressure above a threshold.

315. The cartridge of claim 303, wherein the second portion includes an outlet closure that is removable by a force external to the cartridge.

316. The cartridge of claim 302, wherein the container has a volume that is less than a volume of beverage to be formed using the cartridge.

317. The cartridge of claim 302, wherein the gas source is a charged zeolite.

318. The cartridge of claim 303, wherein the first and second portions are sealed from an exterior environment and the first portion contains a carbon dioxide source in solid form arranged to emit carbon dioxide gas for use in mixing with a beverage precursor liquid to form a beverage.

319. The cartridge of claim 303, wherein the first portion is sealed from an exterior environment and a pressure in the first portion prior to breaking the seal of the first portion is less than 100 psi.

320. The cartridge of claim 302, wherein the flow controller includes a valve.

321. The cartridge of claim 320, wherein the valve is controllable by a beverage making machine that is adapted to use the cartridge to form a beverage.

322. The cartridge of claim 320, wherein the valve automatically controls activation fluid flow into the cartridge to maintain a suitable gas pressure in the cartridge.

323. The cartridge of claim 320, wherein the valve includes a flexible portion of the container that is manipulable by a beverage making machine to open and close the valve.

324. The cartridge of claim 323, wherein the flexible portion includes a portion of opposed barrier layers that are movable towards and away from each other.

325. The cartridge of claim 320, wherein the valve is a pressure regulating valve.

326. The cartridge of claim 320, wherein the valve includes a gate that is movable by a beverage making machine to open and close the valve.

327. A cartridge for forming a beverage, comprising:

a container including a first portion containing a gas source for emitting a gas through a gas outlet of the container to be dissolved in a beverage precursor liquid, the gas outlet having an outlet conduit that extends from a bottom of the container to near a top of the first portion.

328. The cartridge of claim 327, further comprising a second portion containing a beverage medium for mixing with a precursor liquid to form a beverage and a beverage medium outlet through which beverage medium exits the second portion.

329. The cartridge of claim 327, wherein the container includes a barrier layer arranged to define the first portion.

330. The cartridge of claim 327, wherein the container has an activator inlet through which fluid is provided to activate the gas source, and the activator inlet directs fluid toward a bottom of the first portion.

331. The cartridge of claim 328, wherein the container has an activator inlet through which fluid is provided to activate the gas source and wherein the activator inlet is on a same side of the container as the gas outlet and the beverage medium outlet.

332. The cartridge of claim 331, wherein the container has a precursor liquid inlet through which precursor liquid is introduced into the container for mixing with the beverage medium, wherein the precursor liquid inlet is located on a same side of the container as the gas outlet and the beverage medium outlet.

333. The cartridge of claim 327, wherein the gas source includes particles of a charged zeolite, and the cartridge further includes a filter arranged to resist movement of the particles from a gas source part of the first portion to a gas outlet part of the first portion.

334. The cartridge of claim 333, wherein the gas outlet includes a conduit that extends from the gas outlet, through the gas source part of the first portion, through the filter and into the gas outlet part of the first portion.

335. The cartridge of claim 327, wherein the container has a volume that is less than a volume of beverage to be formed using the cartridge.

336. The cartridge of claim 327, wherein the first portion is sealed from an exterior environment and a pressure in the first portion prior to breaking the seal of the first portion is less than 100 psi.

337. A cartridge for forming a beverage, comprising:

a container including a first portion containing a gas source for emitting a gas through a gas outlet of the container to be dissolved in a beverage precursor liquid,

wherein the container includes a pair of opposed barrier layers that are joined together to form at least a part of the first portion, the barrier layers being joined together in a pattern

to define a filter in the first portion that separates a gas source part of the first portion from a gas outlet part of the first portion.

338. The cartridge of claim 337, wherein the container has an activator inlet through which fluid is provided to activate the gas source.

339. The cartridge of claim 337, further comprising a second portion containing a beverage medium for mixing with a precursor liquid to form a beverage and a beverage medium outlet through which beverage medium exits the second portion.

340. The cartridge of claim 339, wherein the pair of opposed barrier layers are joined together to form the first and second portions.

341. The cartridge of claim 337, wherein the pattern includes an array of areas where the barrier layers are bonded together that are separated by regions where the barrier layers are not bonded together.

342. The cartridge of claim 341, wherein the gas source includes particles of a charged zeolite, and the filter is arranged to resist movement of the particles from a gas source part of the second portion to a gas outlet part of the second portion.

343. The cartridge of claim 342, wherein the gas outlet includes a conduit that extends from the gas outlet, through the gas source part of the second portion, through the filter and into the gas outlet part of the second portion.

344. The cartridge of claim 337, wherein the barrier layers include a flexible foil laminate.

345. The cartridge of claim 337, wherein the first portion is sealed from an exterior environment and a pressure in the first portion prior to breaking the seal of the first portion is less than 100 psi.

346. A cartridge for forming a beverage, comprising:

a container including a first portion containing a gas source for emitting a gas to be dissolved in a beverage precursor liquid and an activator inlet for introducing a fluid into the first portion to activate the gas source to emit gas, the activator inlet including a conduit that directs the fluid to a bottom of the first portion.

347. The cartridge of claim 346, wherein the activator inlet extends from a top of the container to a bottom of the first portion.

348. The cartridge of claim 347, wherein the container is arranged to have a gas outlet through which gas emitted by the gas source exits the first portion, and wherein the activator inlet and the gas outlet are located on a top of the container.

349. The cartridge of claim 346, further comprising a second portion containing a beverage medium for use in mixing with a beverage precursor liquid to form a beverage

350. The cartridge of claim 349, wherein the container includes a third portion arranged to receive beverage medium from the second portion and receive precursor liquid to mix the precursor liquid with the beverage medium, and wherein the container is arranged to have an outlet from the second portion through which the beverage medium enters the third portion for mixing with the precursor liquid.

351. The cartridge of claim 346, wherein the first portion is sealed from an exterior environment and the first portion contains a carbon dioxide source in solid form arranged to emit carbon dioxide gas for use in mixing with a beverage precursor liquid to form a beverage.

352. The cartridge of claim 346, wherein the second portion includes a movable element that is movable to force beverage medium from the second portion into the third portion.

353. The cartridge of claim 346, wherein the first portion is sealed from an exterior environment and a pressure in the first portion prior to breaking the seal of the first portion is less than 100 psi.

354. The cartridge of claim 346, wherein the gas source is arranged to emit gas suitable for forming a carbonated beverage having a volume of between 100 – 1000 ml and a carbonation level of about 1 to 5.

355. A beverage making system, comprising:

a beverage precursor liquid supply arranged to provide a precursor liquid;

a single cartridge having first and second cartridge portions, the first cartridge portion containing a gas source arranged to emit gas for use in dissolving into the precursor liquid, the second cartridge portion containing a beverage medium arranged to be mixed with a liquid precursor to form a beverage; and

a gas dissolution device arranged to dissolve gas from the first cartridge portion into the precursor liquid;

wherein the system is arranged to mix precursor liquid with the beverage medium to form a beverage.

356. The system of claim 355, wherein the first portion is sealed from an exterior environment and a pressure in the first portion prior to breaking the seal of the first portion is less than 100 psi.

357. The system of claim 355, further comprising:

a gas activating fluid supply arranged to provide fluid to the first portion for contact with the gas source to cause the gas source to emit gas.

358. The system of claim 355, wherein the system mixes the beverage medium with precursor liquid to form a beverage such that none of the beverage contacts the gas source.

359. The system of claim 358, wherein the system is arranged to pass precursor liquid through the second chamber to mix the precursor liquid with the beverage medium.

360. The system of claim 355, further comprising:

a gas supply arranged to conduct gas emitted by the gas source, under pressure greater than the ambient pressure, to the gas dissolution device.

361. The system of claim 355, wherein the gas dissolution device includes a carbonator with a membrane that separates a liquid side from a gas side of the carbonator, where gas is provided to the gas side and the beverage precursor liquid supply provides precursor liquid to the liquid side such that gas on the gas side is dissolved in the precursor liquid on the liquid side.

362. The system of claim 361, wherein the precursor liquid supply includes a reservoir and a pump that moves precursor liquid from the reservoir through the carbonator.

363. The system of claim 355, further comprising a chamber that is arranged to hold at least the first cartridge portion in the chamber under a pressure that is greater than an ambient pressure.

364. The system of claim 355, wherein the first and second cartridge portions are each part of respective first and second cartridges that are distinct from each other.

365. The system of claim 355, wherein the first and second cartridge portions are part of a single cartridge and the first and second cartridge portions are separated from each other.

366. The system of claim 365, wherein the first and second cartridge portions are separated by a permeable element.

367. The system of claim 365, wherein the first and second cartridge portions are separated by an impermeable element.

368. The system of claim 355, further comprising:

a gas activating fluid supply arranged to control an amount of fluid provided to the first cartridge portion to control an amount of gas emitted by the gas source.

369. The system of claim 355, wherein the first and cartridge portions each has a volume that is less than a volume of beverage to be formed using the cartridge portions.

370. The system of claim 355, wherein the system is arranged to use the first and second cartridge portions over a period of time less than about 120 seconds to form a

carbonated liquid having a volume of between 100 – 1000 ml and a carbonation level of about 2 to 4 volumes.

371. The system of claim 355, wherein the carbon dioxide source is in solid form.

372. The system of claim 355, further comprising a cartridge interface that includes first and second receiving portions that respectively receive the first and second cartridge portions.

373. The system of claim 372, wherein the first and second receiving portions are separated and can be opened and closed independent of each other.

374. The system of claim 355, wherein a cartridge associated with the first and second cartridge portions is pierced to form at least one inlet or at least one outlet.