

Claims

1. A beverage preparation machine (1) comprising

- a fluid system comprising a fluid source (2), a fluid pump (3), a fluid heating element (4),

- at least two container holders (7, 7a, 7b) adapted for receiving corresponding beverage ingredient containers (11, 17),

- a control unit (8) arranged for controlling the fluid system in a manner to prepare a beverage by mixing fluid with the beverage ingredient contained in the containers to produce a beverage component in each of the containers,

wherein the control unit (8) is further arranged to dispense part or whole of the beverage components sequentially or simultaneously to produce the beverage,

wherein the container holders (7, 7a, 7b) differ from one another for holding containers of different sizes and/or types and,

wherein it further comprises separate fluid delivery interfaces (9a, 9b) arranged for independently delivering fluid in one of the corresponding ingredient containers, each interface being connected to the fluid system and being adapted to a different container,

characterised in that said separate fluid delivery interfaces (9a, 9b) have different structural and kinematic configurations, and

said different kinematic configurations being different relative movements between the container and the fluid interface that interacts therewith.

2. Beverage preparation machine (1) according to claim 1, wherein the fluid delivery interfaces (9a, 9b) comprise different fluid delivery elements which characteristics differ amongst at least one or a

combination of the following characteristics: number of delivery elements, number of delivery outlets in each element, fluid delivery outlet shape, fluid delivery outlet diameter, fluid delivery outlet flow direction, flow conducting channels size of each interface (number, diameter and/or length).

3. Beverage preparation machine (1) according to claim 2, wherein the control unit (8) is arranged to control the fluid system for each of the delivery interface (9a, 9b) in a different manner such that at least one or a combination of the fluid temperature, the fluid flow rate, the fluid pressure or the fluid volume that is delivered in one container (11), differs from that of the fluid delivered in the other container (17).

4. Machine (1) according to the preceding claim 2 or 3, wherein the type of fluid delivery element is chosen within the list comprising:

(a) At least one fluid injection needle (40, 46) able to pierce through the wall of an ingredient container and protrude hereinto for injection of fluid,

(b) A shower plate able to distribute fluid over at least a fluid-permeable portion of the ingredient container.

5. A beverage preparation machine (1) according to any one of the preceding claims, wherein at least one of the fluid interface (9a, 9b) is connected to the rest of the machine fluid system through a releasable fluidic connection, such that it can be detached from the machine and replaced by another type of fluid interface having the same releasable fluidic connection.

6. A beverage preparation machine (1) according to any one of the preceding claims, which further comprises a fluid-cooling element.

7. A beverage preparation machine (1) according to any one of the preceding claims, wherein separate fluid delivery interfaces differ by at least one structural element that involves at least one of the kinematic movements of rotation or translation.

8. A beverage preparation system comprising a machine (1) according to any one of the preceding claims 1 to 7, in combination with at least two containers (11, 17) taken from the list of: loose coffee pods, loose coffee pads, compacted coffee pods, rigid or semi-rigid capsules, flexible film containers such as sachets, composite containers such as sachets having a rigid portion, rigid or semi-rigid canisters.

9. A beverage preparation system according to the preceding claim 8, wherein the containers respectively comprise:

(i) A first container to be held functionally by the first container holder, which is a coffee pod (11) containing roast and ground coffee, the walls of the pod being made of a pierceable, rupturable or tearable laminated composite film with moisture and oxygen barrier properties,

(ii) A second container to be held functionally by the second container holder, which is a sachet (17) made of a pierceable, rupturable or tearable film pouch sealed around at least one spout, said at least one spout element comprising at least one fluid injection inlet and at least one beverage dispensing outlet.

10. A beverage preparation system according to any one of the preceding claims 1 to 9, wherein the headspace in at least one of the ingredient containers is lower than 20%, preferably less than 10%, most preferably less than 5%.