In variant embodiments, which are not illustrated, the shape of the first or second example may be alternatively implemented, including: with a straight trailing or leading edge, and; with straight adjoining edges.

Referring to figure 13, a third example that implements the features of the first example is provided. The elements **80** are rhomboid in shape. The rhomboid shape is implemented with a curved leading edge **84** and a curved trailing edge **86**. Minor adjoining edges are curved to correspond to the radii of the container. In variant embodiments, which are not illustrated, one or more edges of the rhomboid may be straight.

Referring to figure 14, a fourth example that implements the features of the first example is provided. The elements **80** are physically arranged as a numeral 1 or a 0 to encode a logical 1 or a 0. A top of the 1 includes an extension **88** to provide said asymmetric arrangement.

The asymmetry of the code can be used to determined a primary direction of rotation for use in machines with more advanced container processing units that can rotate the container in both directions as part of a more sophisticated preparation process. For example, directional containers may include interior elements to direct the fluid in a particular path through the precursor material for improved preparation, which is dependent on the rotation direction. As an example the interior elements may be arranged as radial swirls or steps so as to create a path that is directionally dependent. Less sophisticated machines can read the asymmetric code as would be the case for a regular recliner or arch-shaped element, hence the asymmetric code is retro compatible on legacy machines.

A method of processing the code **44** comprises the following steps:

Step 1: reading the positions associated with the elements **80** to determine the absence of presence of and element as a logical 1 or a 0. Where the elements are encoded as for the fourth example, the physical presence of a 1 or a 0 is alternatively determined as a logical 1 or a 0.

Step 2: optionally determining a direction of reading/rotation from the orientation of the asymmetric elements.

Whilst the code is illustrated herein as being arranged on the container, it will be appreciated that the code can be formed integrally on the container or formed on a separate substrate (not illustrated) which can be attached to the container.

CLAIMS

1. A container arranged for containing a precursor material for use with a machine for preparing a beverage and/or foodstuff, the container including a machine-readable code storing preparation information for use with a preparation process performed by said machine, the code comprising a plurality of elements,

   the elements of the code are arranged to be read sequentially as the container is rotated about an axis of rotation (0),

   wherein the elements are arranged to be asymmetric about an axis (R) that extends in a radial direction from the axis of rotation, the asymmetric arrangement to indicate a particular direction of rotation.

2. The container of claim 1, wherein the code elements are arrow shaped to indicate said direction of rotation.

3. The container of claim 2, wherein a leading edge of the arrow shape is either linear and/or curved.

4. The container of claim 3, wherein a trailing edge of the arrow shape corresponds to the leading edge.

5. The container of claim 1, wherein the code elements are rhomboid shaped.

6. The container of claim 5, wherein a leading edge of the rhomboid is curved or is linear.

7. The container of claim 1, wherein the elements are physically arranged as a numeral 1 or a 0 to encode a logical 1 or a 0, wherein a top end of the 1 includes an extension to provide said asymmetric arrangement.

8. The container of any preceding claim, wherein the container includes a storage portion and a closing member, which are connected at a flange, wherein the code is readable from a side of the flange that comprises a lower surface.

9. A substrate for attachment to a container for containing a precursor material for use with a machine for preparing a beverage and/or foodstuff, the substrate comprising a code of any of claims 1 to 8.

10. A system comprising the container of any of claims 1 to 9 and a machine for preparing a beverage and/or foodstuff, the machine including:

    a code reading system to read the code of the container;

    a processing unit for processing the precursor material of the container, and;

    electrical circuitry to control the processing unit based on preparation information read from the code.

11. The system of claim 10, wherein the code reading system is arranged to read the code as the container is rotated about an axis of rotation, and the processing unit is arranged to process the precursor material as the container is rotated about said axis of rotation.

12. Use of the container of any of claims 1 to 9 for a machine for preparing a beverage and/or foodstuff or a precursor thereof, the machine including:

    a code reading system to read the code of the container;

    a processing unit for processing the precursor material of the container, and;

    electrical circuitry to control the processing unit based on preparation information read from the code.

13. A method of encoding preparation information with a code with elements arranged to be read sequentially as the container is rotated about an axis of rotation (O), the method comprising:

    arranging the elements to be asymmetric about an axis (R) that extends in a radial direction from the axis of rotation, the asymmetric arrangement to indicate a particular direction of rotation.

14. A method of reading preparation information for use in a preparation process in which a machine is controlled based on the preparation information to prepare a beverage and/or foodstuff or precursor thereof, the method comprising:

    reading code elements in rotation, which are asymmetric about an axis (O) that extends in a radial direction from the axis of rotation (R), the asymmetric arrangement to indicate a particular direction of rotation;

    decoding the read code elements.

15. Electrical circuitry to implement the method of claim 14.

16. A computer readable medium comprising program code to implement the method of claim 14.