CLAIMS

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

   a reference portion (R) to locate the code; a data portion (D) to store the preparation information,

   characterized in that data portion includes first and second partially overlapping predetermined positions, which encode one of three conditions as:

   an absence of a data unit at both positions;

   a presence of a data unit at the first position, and an absence of a data unit at the second position, and;

   a presence of a data unit at the second position and an absence of a data unit at the first position,

   such that the conditions which are encoded are compactly positioned.

2. The container of claim 2, wherein the data units and predetermined positions are equally sized.

3. The container of any preceding claim, wherein the first and second partially overlapping predetermined positions overlap by less than half an area of the predetermined position.

4. The container of any preceding claim, wherein the first and second partially overlapping predetermined positions overlap by greater than 5 or 10% an area of the predetermined position.

5. The container of any preceding claim, wherein the first and second partially overlapping predetermined positions are arranged on an encoding line (E).

6. The container of any preceding claim, wherein the data portion comprises at least one data unit arranged an encoding distance (d) from a start position along a virtual encoding line (E) as a variable to at least partially encode a value of a parameter of the preparation information, wherein the encoding line(s) is circular and the distance(s) (d) is an angular distance,

wherein the conditions encoded by the overlapping predetermined positions are a condition associated with a parameter encoded by the encoding distance.

7. The container of any preceding claim, wherein the data units are arranged to be located by their centres, such that an instance of both the first and second predetermined positions comprising overlapping data units is prevented from encoding a fourth condition since a centre of an object comprising two of the overlapping data units is not at a centre of one of the predetermined positions.

8. A substrate for attachment to a container for containing a precursor material for use with a machine for preparing a beverage and/or foodstuff or a precursor thereof; or for attachment to said machine, the substrate comprising a code, the code comprising:

a reference portion (R) to locate the code; a data portion (D) to store the preparation information,

wherein data portion includes first and second partially overlapping predetermined positions, which encode one of three conditions as:

an absence of a data unit at both positions;

a presence of a data unit at the first position, and an absence of a data unit at the second position, and;

a presence of a data unit at the second position and an absence of a data unit at the first position,

such that the conditions which are encoded are compactly positioned.

9. A machine for preparing a beverage and/or foodstuff or a precursor thereof, the machine including:

a code reading system to read a code of a container according to one of claims 1-8;

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

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

the electrical circuitry configured to implement the steps of:

locating a reference portion (R) of the code;

reading a data portion (D) of the code, which is arranged relative the located reference portion;

reading first and second partially overlapping predetermined positions of the data portion, which encode one of three conditions as: an absence of a data unit at both positions; a presence of a data unit at the first position and an absence of a data unit at the second position, and; a presence of a data unit at the second position and an absence of a data unit at the first position.

10. A system comprising the container of any of claims 1 to 7 and the machine of claim 9.

11. Use of the container of any of claims 1 to 7 for the machine for preparing a beverage and/or foodstuff or a precursor thereof according to claim 9.

12. A method of encoding preparation information with a code of a container according to one of claims 1-8, the method comprising:

arranging a data portion of the code relative to a reference portion of the code, and;

arranging first and second partially overlapping predetermined positions of the data portion, to encode one of three conditions as: an absence of a data unit at both positions; a presence of a data unit at the first position and an absence of a data unit at the second position, and; a presence of a data unit at the second position and an absence of a data unit at the first position, such that the conditions which are encoded are compactly positioned.

13. A method of reading preparation information from a code of a container according to one of claims 1-8 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:

locating a reference portion (R) of the code;

reading a data portion (D) of the code, which is arranged relative the located reference portion;

reading first and second partially overlapping predetermined positions of the data portion, which encode three conditions as: an absence of a data unit at both positions; a presence of

a data unit at the first position and an absence of a data unit at the second position, and; a presence of a data unit at the second position and an absence of a data unit at the first position.

14. Electrical circuitry to implement the method of claim 13.

15. A computer readable medium comprising program code to implement the method of claim 13.