CLAIMS

1. A container (6) for use with a beverage or foodstuff preparation machine (4), the container (6) comprising:

   a storage portion (58) for containing a precursor material (150);

   a code (44) for storing preparation information used by said machine (4) to process the precursor material (150), the code (44) configured to be readable by a code reading system (18) of the machine (4), which comprises: a lighting system (110) to project an emission (114) to the code (44);

   the code (44) comprises a reflector layer (126), which is configured to reflect the projected emission (114) as reflected emission (116),

   the container (6) further comprising a support layer (128) to support the code (44),

   wherein the reflector layer (126) is arranged to reflect the emission before it is transmitted to a support layer (128),

   characterized in that the code (44) is arranged to overlap the precursor material (150) such that a projected emission (144) from the lighting system (110) projects into the precursor material (150),

   wherein the support layer (128) being made with a material at least partially transparent to the emission (114) from the lighting system (110), and

   and the precursor material (150) is arranged to absorb the projected emission (114).

2. The container (6) of claim 1, wherein the precursor material (150) is absorbent to at least 60% of the emission from the lighting system (110).

3 The container (6) of either of claims 1 or 2, wherein the precursor material (150) comprises ground coffee.

4. The container (6) of any preceding claim, wherein the reflector layer (126) is configured to diffusively reflect the projected emission (114), with a reflectance to the emission of at least 70%.

5. The container (6) of any preceding claim, wherein the reflector layer (126) is formed of one or more inks that do not comprise carbon and the precursor material comprises carbon.

6. The container (6) of any preceding claim, wherein the projected emission (114) of the lighting system (110) has a wavelength of greater than 700 nm or 800 nm.

7. The container (6) of any preceding claim, wherein the portion of the container (6) comprising the support layer (128) and code (44) is configured to be penetrable by a one or more penetrators, each with a tip angled at 70 – 30 degrees, when subject to a force of greater 5 – 15 N per penetrator.

8. The container (6) of claim 7, wherein the support layer (128) has a thickness of 50 to 150 microns.

9. The container (6) of any preceding claims, wherein:

   the support layer (128) is transparent to at least 30 – 80% of the projected emission (114) from the lighting system (110), and/or;

   the precursor material (150) is absorbent to at least 60% of the projected emission (114) from the lighting system (110).

10. The container (6) of any preceding claim, wherein the container (6) is biodegradable as defined with reference to the description.

11. A system (2) comprising the container (6) of any preceding claim and a machine (4) for preparing a beverage or a foodstuff by processing said precursor material (150), the machine (4) comprising:

    a code reading system (18) to read said code (44);

    a processing unit (14) for processing the material of the container (6) to the beverage or foodstuff, the processing unit (14) comprising a perforator to perforate the support layer (128) of the container (6);

    electrical circuitry (16) to control the processing unit (14) to process the container (6) based on the preparation information.

12. A closing member (56) for closing a storage portion (58) of a container (6) for use with a beverage or foodstuff preparation machine (4), wherein the closing member (56) comprises:

a code (44) for storing preparation information used by said machine (4) to process the precursor material, the code (44) configured to be readable by a code reading system (18) of the machine (4), which comprises: a lighting system (110) to project an emission (114) on to the code (44);

the code (44) comprises a reflector layer (126), which is configured to reflect the projected emission (114);

the closing member (58) further comprising a support layer (128) to support the code (44),

wherein the reflector layer (126) is arranged to reflect the projected emission (114) as reflected emission (116) before it is transmitted to a support layer (128),

characterized in that the code (44) is arranged to overlap the precursor material (150) such that a projected emission (114) from the lighting system (110) projects into the precursor material (150),

wherein the support layer (128) being made with a material at least partially transparent to the projected emission (114) from the lighting system (110), and

and the precursor material (150) is arranged to absorb the projected emission (150).

13. Use the closing member (58) of claim 12 for a container (6) containing precursor material (150) for use with a beverage or foodstuff preparation machine (4).

14. A method of forming a closing member (58) for a container (4) for use with a beverage or foodstuff preparation machine (4), the method comprising:

printing a code (44) on a protective layer (122) through which the code (44) is readable by a code reading system (18), the code (44) comprising a reflector layer (126), which is configured to reflect a projected emission (114) as reflected emission (116) from the code reading system (18), the reflector layer (126) arranged to reflect the projected emission (114) before it is transmitted to a support layer (128), and;

connecting the layers to the support layer (128), wherein the support layer (128) is made with a material which is at least partially transparent to the projected emission (114).