

Claims

1. A method of cooling a container comprising a beverage, the container being provided in contact with a cooling contact body thermally conductively coupled to a cooling element, the method comprising:
 - 5 - operating the cooling element;
 - obtaining an ambient temperature of the environment outside the container and the cooling contact body;
 - defining, based on the ambient temperature, a cut on temperature;
 - 10 - obtaining a medium temperature indicative of a temperature of the beverage;
 - operating the cooling element if the medium temperature is larger than the cut on temperature until a pre-determined end criterion is met.
- 15 2. The method according to claim 1, wherein the cut on temperature decreases if the ambient temperature rises.
3. The method according to claim 2, wherein the relation between
20 the cut on temperature and the ambient temperature is substantially linear.
4. The method according to any one of the preceding claims 1-3, further comprising:
 - 25 - obtaining a beverage volume stored in the container; and
 - defining the cut on temperature also based on the beverage volume.

5. The method according to claim 4, wherein the cut on temperature rises if the beverage volume decreases.
6. The method according to claim 5, wherein the relation between
5 the cut on temperature and the beverage volume is substantially linear.
7. The method according to any one of the claims 4 to 6, wherein the
determining of the beverage volume stored in the container
10 comprises:
- receiving an initial value of an initial volume beverage stored in the container;
 - tracking a withdrawn volume of beverage removed from the container; and
 - 15 - subtracting the withdrawn volume from the initial volume.
8. The method according to claim 4, wherein obtaining a beverage volume stored in the container comprises at least one of:
- determining an amount of beverage dispensed;
 - 20 - determining a weight of the container including the beverage volume stored therein.
9. The method according to any of the preceding claims 1-8, wherein the pre-determined end criterion is at least one of:
- 25 - a medium temperature end value of the medium temperature; and
 - a cooling time interval lapsed from the moment of the start of the operation of the cooling element.

10. The method according to claim 9, wherein at least one of the medium temperature value and the cooling time interval is based on at least one of:
- the medium temperature;
 - 5 - the ambient temperature;
 - the beverage volume.
11. The method according to claim 9, wherein the pre-determined end criterion is the cooling time interval lapsed from the moment of
- 10 the start of the operation of the cooling element, further comprising:
- if the cooling time interval has lapsed, obtain the medium temperature;
 - continue operation of the cooling element if the medium
 - 15 temperature is higher than or equal to the cut-on temperature, until the cooling time interval has lapsed again.
12. The method according to any of the preceding claims 1-11, further comprising if a pre-determined defrost interval has lapsed, not
- 20 operating the cooling element if the medium temperature is larger than the cut on temperature until a pre-determined defrost criterion is met.
13. The method according to claim 12, wherein the pre-determined defrost criterion is at least one of:
- 25
- a medium temperature defrost value of the medium temperature; and
 - a cooling time interval lapsed from the moment of the start of the operation of the cooling element.

14. The method according to any of the preceding claims, wherein the medium temperature is at least one of the following:
- a container temperature of the container;
 - a beverage temperature of the beverage;
 - 5 - a cooling contact body temperature of the cooling contact body.
15. A cooling system for contact cooling of a beverage container, the system comprising:
- a cooling element;
 - 10 a cooling contact body thermally conductively connected to the cooling element and arranged to be in thermally conductive contact with the container;
 - a temperature sensing module arranged to sense temperature of at least one of the cooling contact body, the container and the beverage; and
 - 15 a processing unit arranged to:
- obtain an ambient temperature of the environment outside the container and the cooling contact body;
 - define, based on the ambient temperature, a cut on temperature;
 - obtain a medium temperature indicative of a temperature of the beverage; and
 - 20 - operate the cooling element if the medium temperature is larger than the cut on temperature until a pre-determined end criterion is met.