Claims

1. An ice bath comprising a container (1), a refrigeration coil (2) for causing liquid in the container (1) to turn to ice, a pipe (4) for carrying liquid to be cooled by the ice bath for dispense and at least three conductive probes (20, 21, 22) acting as electrodes for measuring ice thickness, wherein the conductive probes (20, 21, 22) are provided between the refrigeration coil (2) and the pipe (4) for carrying liquid to be dispensed such that a first one of the conductive probes (20) is provided closer to the refrigeration coil (2) than at least second (21) and third conductive probes (22), and thereby said second (21) and third conductive probes (22) are provided closer to the piping (4) than the first conductive probe (20), and wherein the second (21) and third probes (22) are equidistant from the refrigeration coil (2),

characterised in that the ice bath further comprises means for measuring the conductance between the first probe (20) and the second probe (21), the first probe (20) and the third probe (22), and the second probe (21) and the third probe (22).

2. An ice bath as claimed in claim 1 wherein only three conductive probes (20, 21, 22) are provided between the refrigeration coil (2) and the pipe (4), one of which lies closer to the refrigeration coil (2) than the second (21) and third probes (22).

3. An ice bath as claimed in any preceding claim wherein the container (1) has side walls, the refrigeration coil (2) lying closer to the side walls than the piping (4) carrying liquid to be dispensed and wherein the conductive probes (20, 21, 22) are mounted between the refrigeration coil (2) and the piping (4).

4. An ice bath as claimed in any preceding claim wherein the piping (4) is provided in the form of a coil.

5. An ice bath as claimed in any preceding claim wherein the second (21) and third probes (22) are also equidistant from the pipe (4) for carrying liquid to be dispensed.

6. An ice bath as claimed in any preceding claim including four or more probes, at least one of the probes being closer to the refrigeration coil (2) than at least some of the other probes.

7. An ice bath as claimed in any preceding claim, wherein the means for measuring the conductance is arranged to measure the conductance between each respective pair of probes (20, 21, 22) in turn.

8. An ice bath as claimed in any preceding claim wherein DC current is applied to the probes (20, 21, 22) in turn by a controller in order to measure conductance between respective pairs of probes (20, 21, 22).

9. A method of measuring ice build up in an ice bath as claimed in any preceding claim, comprising measuring conductance between the first probe (20) and the second probe (21), the first probe (20) and the third probe (22), and the second probe (21) and the third probe (22) in turn and using the measured conductance values to determine any of; when ice has reached the first probe (20), when ice has reached the second (21) and third probes (22), and when ice has begun to recede from the second (21) and third probes (22) and to use the measurements to control apparatus for causing ice to be generated.

10. A method as claimed in claim 9 wherein a minimum ice value is set as that of a thickness which extends from the refrigeration coil (2) to the first probe (20), and a maximum ice value is set a level of an ice thickness which extends to both the second (21) and third probes (22) and controlling icing to keep the amount of ice within the liquid within the container (1) between the minimum and maximum levels.

11. Use of an ice bath apparatus as claimed in any of claims 1 to 8 for measuring total dissolved solids within a liquid within the container (1).