Claims

1. A feeding device (1) for feeding an infant, comprising a first fluid receptacle (4), a second fluid receptacle (8), a teat (10), as well as a valve structure (24, 25, 28) for selectively providing a fluid communication between the fluid receptacles (4, 8) and the teat (10), characterized by a sensor (20) configured to detect use of the feeding device (1), and a controller (22) for controlling the valve structure (24, 25, 28) based on the detected use of the feeding device (1) by the sensor (20).

2. The feeding device according to claim 1, wherein the first receptacle (4) contains a fore milk equivalent, wherein the second receptacle (8) contains a hind milk equivalent or a mid milk equivalent, wherein the feeding device (1) preferably includes a third receptacle (5) containing a milk equivalent that differs from the milk equivalents contained in the other receptacles.

3. The feeding device according to any of the preceding claims, wherein the sensor (20) is configured to detect one or more of:

-a sucking behavior;

-a fluid pressure upstream of the teat (10); and

-a fluid flow rate of fluid flowing to or through the teat (10).

4. The feeding device according to any of the preceding claims, wherein the sensor (20) is configured to generate a sensor signal indicative of a detected use of the device (1), wherein the controller (22) is preferably configured to process the sensor signal for determining a predetermined change of the use of the feeding device (1), wherein the controller (22) is preferably configured to change a state of the valve structure in case a predetermined change of the use of the feeding device (1) has been determined by the controller (22).

5. The feeding device according to any of the preceding claims, including a signaling device (13), e.g. sound signal emitter and/or light signal emitter for signaling a detected use of the feeding device to an operator, wherein the feeding

device preferably includes a user interface (K1, K2) for example at least one user operable switch and/or button, for controlling the valve structure (24, 25, 28) and/or controller (22), in particular for initiating a change of a state of the valve structure 24, 25, 28).

6. The feeding device according to any of the preceding claims, wherein the predetermined change of the use of the feeding device (1) is associated with one or more of:

-a detected predetermined pause in sucking; and

-a detected decrease of an average fluid flow rate, for example a threshold decrease of the average flow rate compared to an initial flow rate at a start of a feeding cycle.

7. The feeding device according to any of the preceding claims, wherein the controller (22) is configured to control the valve structure (24, 25, 28) to allow fluid communication between the first receptacle (4) and the teat (10) during a first feeding period, for example from the start of a feeding cycle, the controller for example being configured to detect the start of the feeding cycle based on the detected use of the feeding device (1) by the sensor (20), the controller for example being configured to block fluid communication between the second receptacle (8) and the teat (10) during the first feeding period.

8. The feeding device according to any of the preceding claims, wherein the controller (22) is configured to control the valve structure (24, 25, 28) to allow fluid communication between the second receptacle (8) and the teat (10) during a second feeding period, wherein the controller (22) is optionally configured to control the valve structure (24) to block or adjust fluid communication between the first receptacle (4) and the teat (10) during the second feeding period.

9. The feeding device according to claim 7 and 8, wherein the controller (22) is configured to control the valve structure (24, 25, 28) such that the start of the second feeding period and/or the start of an optional third feeding period is based on the detected use of the feeding device (1) by the sensor (20).

10. Method for discharging fluid from an infant feeding device (1), for example a feeding device according to any of the preceding claims, the method including:

-feeding a first fluid to a teat (10) of the feeding device (1) during a first feeding period;

-a sensor (20) monitoring a use of the feeding device (1) during the first feeding period; and

-feeding a second fluid to the teat (10) of the feeding device (1) during a second feeding period, the second feeding period starting in case a predetermined change of the use of the feeding device has been detected by the sensor (20),

wherein the method optionally includes feeding a third fluid to the teat (10) of the feeding device (1) during the second feeding period and/or during a further third feeding period, the third fluid optionally being a mixture of the first fluid and the second fluid,

wherein the method optionally includes emitting a signal (S) to an operator when a change of the use of the feeding device has been detected by the sensor (20); the method for discharging fluid from an infant feeding device (1) optionally including controlling a valve structure (24, 25, 28) to feed the first fluid to the teat (10) during the first feeding period and to feed the second fluid to the teat (10) during the second feeding period, the method optionally including controlling a valve structure (24, 25, 28) to feed a third fluid to the teat (10) during the a third feeding period.

11. Method according to claim 10, wherein the first fluid is a fore milk equivalent, wherein the second fluid is a mid-milk equivalent or a hind-milk equivalent;

or

wherein the first fluid is a fore milk concentrate or a hind milk concentrate, wherein the second fluid is water, wherein the water is preferably mixed with the first fluid during a respective feeding period.

12. A kit of parts for use in the method of claim 10, the kit comprising at least a first liquid (or first powder to be reconstituted with water to provide the first liquid) and a second liquid (or second powder to be reconstituted with water to provide the second liquid), each of the first and second liquid comprising a fat fraction, a carbohydrate fraction and a protein fraction, wherein the first and second liquid together form an infant formula or young child formula, preferably an infant formula; and wherein the energy content from fat of the total energy content of the second liquid is at least 20% higher as compared to the energy content from fat of the total energy content of the first liquid.

13. A kit of parts for use in the method of claim 10, the kit comprising at least a fore milk equivalent and a hind milk equivalent, the fore and hind milk equivalent each comprising a fat fraction, a protein fraction, a carbohydrate, and a mineral fraction, wherein the fore milk equivalent is not identical to the hind milk equivalent and wherein

i. the mineral fraction in the fore milk equivalent is substantially the same as the mineral fraction in the hind milk equivalent; and/or

ii. the fat fraction in the fore milk equivalent provides at least 20% less calories than the fat fraction in the hind milk fraction, preferably at least 30% less calories, more preferably at least 40% less; and/or

iii. the protein fraction in the fore milk equivalent is substantially the same as the protein fraction in the hind milk equivalent; and /or

iv. the carbohydrate fraction in the fore milk equivalent is substantially the same as the carbohydrate fraction in the hind milk equivalent; and/or

preferably wherein the fore milk equivalent is not identical to the hind milk equivalent and wherein

i. the mineral fraction in the fore milk equivalent is substantially the same as the mineral fraction in the hind milk equivalent; and

ii. the fat fraction in the fore milk equivalent provides at least 20% less calories than the fat fraction in the hind milk fraction, preferably at least 30% less calories, more preferably at least 40% less calories; and

14. Use of any of the feeding devices of any of claims 1 -9 in the method of anyone of claim 10- 11, preferably wherein the kit of parts of claim 12 or 13 is used in any of the method of any of claims 10-11.

15. A feeding device (1") for feeding an infant, the feeding device comprising a fluid receptacle (4"), a teat (210), and a sensor (20) configured to detect use of the feeding device (1"), and a signaling device (13), e.g. sound signal emitter and/or light signal emitter for signaling a detected use of the feeding device to an operator.

16. Method for discharging fluid from an infant feeding device (1"), for example a feeding device according to claim 15, the method including:

-feeding a first fluid to a teat (10) of the feeding device (1") during a first feeding period;

-a sensor (20) monitoring a use of the first feeding device (1") during the first feeding period; and

- emitting a signal (S) to an operator when a change of the use of the first feeding device (1") has been detected by the sensor (20),

the method optionally including:

halting the use of the first feeding device (1") for example to proceed proceeding with the feeding of a second fluid using a second feeding device (250).