# Claims

1. A dispensing system (54) for a hand hygiene product comprising:

a re-usable sensor module (10) for use with a dispenser for a hand hygiene product; and

a container (56) of the dispenser having a bottom (58) configured to rest on the sensor module (10) and a dispensing opening (60) located opposite to the bottom (58),

wherein the sensor module (10) comprises:

a capsule (12) with a top portion (14) for placing a bottom (58) of the container (56) thereon;

a first sensor (40) arranged within the capsule (12) and configured to measure a parameter; and

a processor (36) arranged within the capsule (12) and coupled to the first sensor (40), wherein the processor (36) is configured to at least temporarily record at least one of the parameter and an event associated therewith;

characterized in that

the top portion (14) of the capsule (12) is made from an elastically deformable material to deform under a force and return to an initial undeformed state after the force is removed,

and that the top portion (14) is dome shaped and comprises a mechanic link (15) in the form of a protrusion extending from an inner surface of the top portion (14) towards the first sensor (40),

and that the top portion (14) is configured to be in contact or to be brought into contact with the first sensor (40) via the mechanic link (15),

and that the parameter measured by the first sensor (40) is associated with the elastic deformation of the capsule (12) resulting from actuation of the dispenser or presence of the container (56).

2. The dispensing system (54) of claim 1, wherein

the mechanic link (15) of the sensor module (10) is configured to move towards the first sensor (40) when the top portion (14) is elastically deformed.

3. The dispensing system (54) according to claim 1 or 2, wherein

the sensor module (10) further comprises a fastening member (18) configured to detachably fasten the sensor module (10) to one of the container (56) and a holder (62) for the container (56).

4. The dispensing system (54) according to claim 3, wherein
the fastening member (18) is detachable from the sensor module (10).

5. The dispensing system (54) according to any of the preceding claims, wherein
the first sensor (40) of the sensor module (10) is one of a force sensor, a pressure sensor and a mechanical switch.

6. The dispensing system (54) according to any of the preceding claims, wherein
the parameter is representative of a weight of the container (56) and/or wherein the event is representative of an actuation of the dispenser.

7. The dispensing system (54) according to claim 6, wherein
the processor (36) of the sensor module (10) is configured to determine, based on at least one of the parameter and the event at least one of a current filling level of the container (56) and an exchange of the container (56).

8. The dispensing system (54) according to any of the preceding claims, wherein
the processor (36) of the sensor module (10) is configured to repeatedly acquire the parameter at predefined points in time and/or at configured thresholds; and/or wherein the processor (36) is coupled to a light-emitting element (76).

9. The dispensing system (54) according to any of the preceding claims, wherein
the sensor module (10) comprises a second sensor (42) configured to detect at least one of a movement and a position of the sensor module (10).

10. The dispensing system (54) according to any of the preceding claims, wherein
the sensor module (10) further comprises a third sensor (44), wherein the third sensor (44) is an optical sensor configured to detect at least one of a current filling level of the container (56) and an exchange of the container (56).

11. The dispensing system (54) according to any of the preceding claims, wherein

the sensor module (10) further comprises a radio transmitter (46) configured to transmit at least one of the parameter and the event associated therewith to a base station.

12. The dispensing system (54) according to any of the preceding claims, further comprising:

a holder (62) configured to accommodate the container (56) with the sensor module (10) being sandwiched between the holder (62) and the bottom (58) of the container (56).

13. The dispensing system (54) according to claim 12, wherein

the sensor module (10) is detachably mounted to the holder (62) by the fastening member (18) according to claim 3 or 4.