Claims

1. An infusion delivery device (1) comprising
a reservoir (2) that is configured for containing a liquid medicament,
a dispensing member (3) that is moveably arranged within the reservoir for dispensing liquid medicament out of the reservoir through an outlet (4) of the reservoir,
an actuation member (5) that is configured for moving the dispensing member (3) within the reservoir (2), and
a controller (6) that is configured for controlling the movement of the dispensing member (3) within the reservoir (2) by the actuation member (5),
wherein the controller (6) is further configured to determine an occlusion hindering the dispensing of liquid medicament out of the reservoir (2) and that is configured to provide a control signal to the actuation member (5), upon determining an occlusion, to move the dispensing member (3) in a reverse direction (7) about a displacement distance (8), and wherein the displacement distance (8) is a model-based displacement distance.

2. The infusion delivery device (1) according to claim 1, wherein the model-based displacement distance (8) takes into account a parameter indicative of the current position of the dispensing member (3) within the reservoir (2) and/or a parameter indicative of the temperature of the reservoir (2) and/or a parameter indicative of the temperature of the liquid medicament within the reservoir (2).

3. The infusion delivery device (1) according to claim 1 or 2, wherein the actuation member (5) comprises a stepper motor, and wherein the model-based displacement distance (8) takes into account an average number of missed steps per train for the stepper motor and/or the motor current.

4. The infusion delivery device (1) according to any one of claims 1 to 3, wherein the model-based displacement distance (8) takes into account a parameter indicative of the pressure exerted by the liquid medicament within the reservoir (2) on the dispensing member (3).

5. The infusion delivery device (1) according to any one of claims 1 to 4, wherein the model-based displacement distance (8) takes into account a parameter indicative of the compressibility of the liquid medicament within the reservoir (2).

6. The infusion delivery device (1) according to any one of claims 1 to 5, wherein the model-based displacement distance (8) is provided by a look-up table.

7. A method for controlling an infusion delivery device (1) comprising a reservoir (2) that is configured for containing a liquid medicament, a dispensing member (3) that is moveably arranged within the reservoir (2) for dispensing liquid medicament out of the reservoir (2) through an outlet (4) of the reservoir (2), an actuation member (5) that is configured for controlling the movement of the dispensing member (3) within the reservoir (2) by the actuation member (5), wherein the method comprises the steps of

- determining by a controller (6) an occlusion of the outlet hindering the dispensing of the liquid medicament out of the reservoir (2),
- providing a control signal by the controller (6) to the actuation member (5), upon determining an occlusion, to move the dispensing member (3) in a reverse direction (7) by a displacement distance, and

wherein the step of providing a control signal by the controller (6) to the actuation member (5), upon determining an occlusion, to move the dispensing member (3) in a reverse direction (7) by a displacement distance includes determining a model-based displacement distance (8) as the displacement distance.

8. The method for controlling an infusion delivery device (1) according to claim 7, wherein the step of determining the model-based displacement distance is based on one or more of:

- a parameter indicative of the current position of the dispensing member (3) within the reservoir (2), and/or
- a parameter indicative of the temperature of the reservoir (2), and/or
- a parameter indicative of the temperature of the medicament within the reservoir (2), and/or
- a parameter indicative of the pressure exerted on the dispensing member by the liquid medicament within the reservoir (2), and/or
- a parameter indicative of the compressibility of the liquid medicament within the reservoir (2), and/or
- a parameter indicative of the compressibility of the reservoir (2).

9. The method for controlling an infusion delivery device (1) according to claim 7 or claim 8, wherein the actuation member (5) is a stepper motor, and wherein the step of determining the model-based displacement distance is based on one or more of:

- an average number of missed steps per train for the stepper motor, and/or
- the motor current.