

WHAT IS CLAIMED IS:

1. A disinfection tip comprising:

a substantially cylindrical outer housing, the outer housing having an outer wall,
5 a distal wall, and an open proximal surface;

a cavity defined by an aperture extending from the open proximal surface to the
distal wall, the distal wall having an opening defining an inner rim and an inner wall;

a substantially cylindrical inner housing extending from the inner rim in a
proximal direction at least partially a length of the outer housing, the inner housing
10 having an inner proximal surface, an inner sidewall and an outer sidewall, the inner
sidewall forms a liquid-tight seal with an abutting tapered tip of a luer connector when
the disinfection tip is disposed at least partially within the luer connector;

a distal chamber defined by the outer sidewall of the inner housing, the inner
wall and the distal wall of the outer housing, the distal chamber being in fluid
15 communication with the cavity, the distal chamber retaining a disinfectant when the
disinfection tip is at least partially disposed within an outer wall of the luer connector
of the luer connector; and

at least one jet orifice radially disposed on the inner rim, the jet orifice having
an inlet, an outlet and a channel extending from the inlet to the outlet.

- 20
2. The disinfection tip of claim 1, wherein a cylindrical body of an IV connector is
advanced against the distal wall of the outer housing of the disinfection tip, the IV connector
further inserting the disinfection tip into the luer connector, whereby a tapered tip of the luer
connector engages with a lumen of the cylindrical body of the IV connector, the advancement
25 causing the disinfectant to be ejected from the at least one orifice.

3. The disinfection tip of claim 2, wherein the disinfectant further disinfects the lumen of
the IV connector.

4. The disinfection tip of claim 1, wherein an outer wall of the luer connector includes a plurality of threads for engaging at least one thread of the disinfection tip and at least one of a plurality of threads of an IV connector, the at least one thread disposed on a cylindrical body of the IV connector.
- 5
5. The disinfection tip of claim 4, wherein threading the IV connector onto the luer connector transfers an axial force and torque to the disinfection tip, the threading of the IV connector causing the advancement of the disinfection tip.
- 10 6. The disinfection tip of claim 5, wherein the distal wall of the disinfection tip is smooth in order to limit torque coupling during unthreading of the IV connector from the luer connector.
- 15 7. The disinfection tip of claim 5, wherein the distal wall of the disinfection has a rough or textured surface to promote torque coupling.
8. The disinfection tip of claim 5, wherein the distal wall of the disinfection has friction enhancing materials or coatings to promote torque coupling.
- 20 9. The disinfection tip of claim 5, wherein the distal wall of the disinfection has at least one radial spline configured to engage with the IV connector.
- 25 10. The disinfection tip of claim 5, wherein the distal wall of the disinfection has at least one gear tooth configured to engage with a corresponding tooth of the IV connector, the at least one gear tooth configured to promote torque coupling.

11. The disinfection tip of claim 5, wherein the distal wall of the disinfection includes a plurality of radial peaks, in which an incline of the peak is at a right angle with the distal wall while a decline of the peak is at an acute angle with the distal wall, wherein the incline allows for a feature of the IV connector to advance the disinfection tip in the direction of the incline,
5 while the decline prohibits opposite direction of advancement, the direction of advancement being the same direction in which the IV connector is threaded onto the luer connector of the luer connector.
12. The disinfection tip of claim 1, wherein the inlet of the at least one jet orifice is in fluid
10 communication with the distal chamber allowing for the disinfectant or antimicrobial agent to pass from the distal chamber through the channel to the outlet.
13. The disinfection tip of claim 1, wherein the outlet of the at least one jet orifice is disposed on the rim.
15
14. The disinfection tip of claim 1, wherein the outlet of the at least one jet orifice is positioned to direct the disinfectant or antimicrobial agent from the distal chamber in a distal direction towards a center of the outer housing.
- 20 15. The disinfection tip of claim 1, wherein insertion of the disinfection tip allows a volume of the distal chamber to reduce and expel disinfectant or antimicrobial agent through the at least one jet orifice.
16. The disinfection tip of claim 2, wherein the disinfectant disinfects the cylindrical body
25 of the IV connector.
17. The disinfection tip of claim 2, wherein the disinfectant evacuates through a tolerance gap between a plurality of threads of the IV connector and a plurality of threads of a syringe.

18. The disinfection tip of claim 2, wherein at least one thread of the IV connector fully engages at least one of a plurality of threads of the IV connector.
- 5 19. The disinfection tip of claim 2, wherein the disinfection tip may be in a fully threaded position while still permitting the IV connector to sufficiently thread into the luer connector.
20. The disinfection tip of claim 2, wherein the disinfection tip may be in a fully threaded position while still permitting the IV connector to sufficiently thread into the luer connector in
10 compliance with ISO594-2 standards.