WHAT IS CLAIMED IS:

1. A disinfection cap having a housing comprising:

a cylindrical sidewall having an inner surface defining a cavity and a top wall,

an open bottom formed by the cylindrical sidewall with an opening to the cavity within said housing for receiving a hub of a luer connector;

a retention rod disposed within the cavity, the retention rod having a proximal flange, a distal flange and an elongated rod between the proximal flange and distal flange, the distal flange of the retention rod abutting the top wall of the cavity;

a fluid reservoir defined between the inner surface of the housing, the proximal flange of the retention rod and the distal flange of the retention rod; and,

a disinfectant disposed within the fluid reservoir, the disinfectant being retained within the fluid reservoir in an initial state, wherein the hub of said luer connector is received within said inner surface of said cavity,

characterized in that

a diameter of the proximal flange of the retention rod is equal to or slightly larger than a diameter of a proximal portion of the cavity, configured to have an interference fit sufficient to create a fluid seal between the proximal flange of the retention rod and the proximal portion of the cavity and a diameter of the elongated rod is configured to buckle to a final state upon insertion of a hub of the luer connector when the hub of the luer connector is received within the cavity, thereby breaking the fluid seal between the proximal flange and the proximal portion of the cavity and releasing the disinfectant into the cavity disinfecting the hub and a periphery of the luer connector..

2. The disinfection cap of claim 1, wherein at least one circular fin is disposed on the elongated rod, the at least one circular fin having a thickness configured to elastically deform, whereby pressure buildup within the fluid reservoir due to insertion of the luer connector causes deformation of the at least one fin.

3. The disinfection cap of claim 1, wherein a diameter of the elongated rod is configured to compress upon insertion of the hub of the luer connector when the hub of the luer connector is received within the cavity.

4. The disinfection cap of claim 1, wherein a diameter of the distal flange is equal to or larger than a diameter of a distal portion of the cavity configured to create an interference fit sufficient enough to removably hold the retention rod within the cavity.

5. The disinfection cap of claim 1, wherein the disinfection cap is secured by an at least one thread or set of tabs included on an outer surface of the housing.

6. The disinfection cap of claim 1, wherein the retention rod has a height from the proximal flange (152) to the distal flange (154), the height being equal to or slightly less than a height of the cavity (130).

7. The disinfection cap of claim 1, wherein the distal flange (154) is chemically bonded with adhesive to the top wall (114) of the housing.

8. The disinfection cap of claim 1, wherein the proximal flange (152) conforms to the hub of the male luer connector upon insertion of the male luer connector.

9. The disinfection cap of claim 1, wherein the elongated rod (156) buckles into a toroid structure, while the proximal flange (152) does not rotate.

10. The disinfection cap of claim 1, wherein compression of the retention rod (150) causes the proximal flange (152) to buckle and rotate.

11. The disinfection cap of claim 7, wherein the at least one thread (122) can include an inclined thread pattern.

12. The disinfection cap of claim 7, wherein the at least one thread (122) can include a helical-shaped thread pattern.