

CLAIMS

1. A Luer access device, comprising:
 - a body having an outer surface;
 - an opening formed in the outer surface and configured to receive a needleless connector;
 - a soft septum disposed in the opening and having a slit for receiving the needleless connector;
 - a set of threads on the outer surface and positioned proximate to the opening, a portion of the body being adjacent the set of threads; and
 - a retention feature disposed on the portion of the body adjacent the set of threads, wherein the retention feature is positioned to contact a portion of a complimentary set of threads on the needleless connector when threadedly coupled to the set of threads and provide increased resistance to unintentional disengagement of the threaded devices and a tactile feedback to a user of a tightened connection between the Luer access device and the needleless connector, wherein the retention feature comprises a protrusion, wherein the protrusion comprises a forward ramped surface and a rearward ramped surface, wherein the forward ramped surface is tapered at a first angle of incline along an axis that extends outwardly from the body, wherein the rearward ramped surface is tapered at a second angle of incline along the axis that extends outwardly from the body, wherein the second angle of incline is greater than the first angle of incline, wherein the forward ramped surface and the rearward ramped surface converge at an apex generally aligned with a longitudinal axis of the body.

2. The device of claim 1, wherein the set of threads comprises an upper thread and a lower thread, and the portion of the body adjacent the set of threads is interposed between the upper and lower threads.
3. The device of claim 2, wherein the protrusion comprises a first end that abuts the lower thread and a second end that abuts the upper thread.
4. The device of claim 3, wherein the second end comprises a protrusion height that is greater than a protrusion height of the first end such that the protrusion tapers inwardly from the second end to the first end.
5. The device of claim 3, wherein the second end comprises a protrusion height that is greater than a protrusion height of the first end such that the ramped protrusion tapers inwardly from the second end to the first end.
6. The device of claim 1, wherein the apex is asymmetrical and comprises a first width that is greater than a second width to provide an axial taper that forms an interface with the forward ramped surface.
7. The device of claim 1, wherein the retention feature comprises a barb.
8. The device of claim 1, wherein the barb is temporarily deformed when contacted by the complementary set of threads on the needleless connector.
9. A Luer access device, comprising:
 - a body having an outer surface;
 - an opening formed in the outer surface and configured to receive a needleless connector;

a soft septum disposed in the opening and having a slit for receiving the needleless connector;

a set of threads on the outer surface and positioned proximate to the opening; and

a retention feature disposed on a portion of the set of threads, wherein the retention feature is positioned to contact a portion of a complimentary set of threads on the needleless connector when threadedly coupled to the set of threads and provide increased resistance to unintentional disengagement of the threaded devices and a tactile feedback to a user of a tightened connection between the Luer access device and the needleless connector, wherein the retention feature comprises a forward ramped surface and a rearward ramped surface, wherein the forward ramped surface is tapered at a first angle of incline along an axis that extends outwardly from the body, wherein the rearward ramped surface is tapered at a second angle of incline along the axis that extends outwardly from the body, wherein the second angle of incline is greater than the first angle of incline, wherein the first angle of incline provides a gradual increase in rotational torque required to threadedly couple the Luer access device to the needleless connector

10. The device of claim 9, wherein the retention feature comprises a protrusion.

11. The device of claim 10, wherein the protrusion comprises a leading edge and a trailing edge, the leading edge comprising a ramped surface that tapers outwardly from an outer rim surface of the set of threads to an apex of the protrusion.

12. The device of claim 11, wherein the leading edge comprises a first angle of incline and the trailing edge comprises a second angle of incline, the second angle of incline being greater than the first angle of incline.

13. The device of claim 9, wherein the set of threads comprises a gap dividing the set of threads into a first section and a second section, wherein the retention feature is located on the second section.
14. The device of claim 9, wherein the set of threads comprises two or more threads.
15. A method for manufacturing a Luer access device, the method comprising:
- providing a body having an outer surface;
 - forming an opening in the outer surface of the body, the opening be configured to receive a needleless connector;
 - disposing a soft septum into the opening, the soft septum having a slit for receiving the needleless connector;
 - providing a set of threads on the outer surface and positioned proximate to the opening, a portion of the body being adjacent the set of threads; and
 - disposing a retention feature on the portion of the body adjacent the set of threads, wherein the set of threads comprises an upper thread and a lower thread and the portion of the body adjacent the set of threads is interposed between the upper and lower threads, wherein the retention feature is positioned to contact a portion of a complimentary set of threads on the needleless connector when threadedly coupled to the set of threads and provide increased resistance to unintentional disengagement of the threaded devices and a tactile feedback to a user of a tightening connection between the Luer access device and the needleless connector, wherein the retention feature comprises a forward ramped surface and a rearward ramped surface, wherein each of the forward ramped surface and the rearward ramped surface are tapered along the axis that extends outwardly from the body, wherein the forward ramped surface is tapered at

a first angle of incline along an axis that extends outwardly from the body, wherein the rearward ramped surface is tapered at a second angle of incline along the axis that extends outwardly from the body, wherein the second angle of incline is greater than the first angle of incline, wherein the forward ramped surface and the rearward ramped surface converge at an apex generally aligned with a longitudinal axis of the body.