

## CLAIMS

1. A needle tip shield comprising:
  - a needle passageway formed through the needle tip shield for receiving a needle therethrough;
  - a tip shield interior space that receives a needle block therein, the tip shield interior space comprising an opening for inserting the needle block into the tip shield interior space; and
  - a fluid restriction member configured to restrict fluid leakage into and/or out of the needle tip shield, wherein the fluid restriction member is selected from the group consisting of:
    - a fluid impedance member located adjacent the needle passageway that impedes fluid from entering into the needle tip shield through the needle passageway;
    - a fluid retention member that retains fluid within the tip shield interior space; and
    - an anti-splatter member that inhibits fluid splatter when the needle block moves from an open position to a closed position within the tip shield interior space.
2. The needle tip shield of claim 1, wherein the selection comprises the fluid impedance member, the fluid impedance member comprising at least one of:
  - a sponge;
  - an absorbent plug;
  - a foam;
  - a wicking material;
  - a hydrogel;
  - a high viscosity silicone lube;
  - an O-ring;
  - a compliant septum;
  - a membrane; and
  - a tip shield nose that is shaped to impede fluid from entering into the needle tip shield through the needle passageway.
3. The needle tip shield of claim 1, wherein the selection comprises the fluid retention member, the fluid retention member comprising at least one of:
  - a cover placed over the opening to retain fluid within the tip shield interior space; and

an absorbent material placed within the tip shield interior space to retain fluid within the tip shield interior space.

4. The needle tip shield of claim 1, wherein the selection comprises the anti-splatter member, the anti-splatter member comprising at least one of:

a damping member; and

a shock absorbing material,

wherein:

the needle block comprises a V-Clip that is movable between the open position and the closed position, such that:

in the open position, the V-Clip allows a needle to advance distally through the needle passageway;

in the closed position, the V-Clip prevents the needle from advancing distally through the needle passageway;

the damping member is coupled to the V-Clip to slow movement of the V-Clip as it moves from the open position to the closed position; and

the shock absorbing material is placed within the tip shield interior space adjacent the V-Clip to slow movement of the V-Clip as it moves from the open position to the closed position.

5. The needle tip shield of claim 4, wherein the damping member comprises a visco-elastic material.

6. The needle tip shield of claim 5, further comprising a stiffening member coupled to the visco-elastic material.

7. A needle tip shield that impedes fluid from entering into the needle tip shield comprising:  
a needle passageway formed through the needle tip shield for receiving a needle therethrough; and

a fluid impedance member located adjacent the needle passageway that impedes fluid from entering into the needle tip shield through the needle passageway.

8. The needle tip shield of claim 7, wherein the fluid impedance member comprises an absorbent material including at least one of:
- a sponge;
  - an absorbent plug;
  - a foam; and
  - a wicking material.
9. The needle tip shield of claim 7, wherein the fluid impedance member comprises a viscous material including at least one of:
- a hydrogel; and
  - a high viscosity silicone lube.
10. The needle tip shield of claim 7, wherein the fluid impedance member comprises a compliant material including at least one of:
- an O-ring; and
  - a compliant septum.
11. The needle tip shield of claim 7, wherein the fluid impedance member comprises a tip shield nose that is shaped to impede fluid from entering into the needle tip shield.
12. The needle tip shield of claim 7, further comprising a recess adjacent the needle passageway that receives the fluid impedance member therein.
13. The needle tip shield of claim 7, further comprising a membrane coupled to the needle tip shield adjacent the needle passageway that impedes fluid from entering into the needle tip shield.

14. A needle tip shield that retains fluid within the needle tip shield comprising:  
a needle passageway formed through the needle tip shield for receiving a needle therethrough;  
a tip shield interior space that receives a needle block therein, the tip shield interior space comprising an opening for inserting the needle block into the tip shield interior space; and  
a fluid retention member that retains fluid within the tip shield interior space.
15. The needle tip shield of claim 14, wherein the fluid retention member comprises a cover placed over the opening to retain fluid within the tip shield interior space.
16. The needle tip shield of claim 15, wherein the cover comprises at least one of:  
a tape;  
a heat seal material;  
a thin film; and  
a plastic cover.
17. The needle tip shield of claim 15, wherein the cover is coupled to the needle tip shield with at least one of:  
an adhesive;  
a snap feature;  
an interference feature;  
a heat seal material;  
a glue; and  
sonic welding.

18. The needle tip shield of claim 14, wherein the fluid retention member comprises at least one of:

- a sponge;
- a foam;
- an absorbent material;
- a wicking material; and
- a clotting material.

19. The needle tip shield of claim 18, wherein the fluid retention member is placed within the tip shield interior space.

20. The needle tip shield of claim 18, wherein the fluid retention member is coupled to the needle block.