CLAIMS

1. A carrier for storing a blood sample during transportation, the carrier comprising:

a cartridge assembly comprising a cartridge and a cartridge holder releasably coupled to the cartridge, wherein the cartridge comprises one or more porous matrices on which the blood sample is collected;

a chamber having an opening configured to receive the cartridge assembly; and

a release mechanism configured to release the cartridge from the cartridge holder to provide a released cartridge;

wherein the chamber is configured to store the released cartridge in a secured position.

2. The carrier of claim 1, wherein the blood sample is in a substantially dried state.
3. The carrier of claim 1, wherein the blood sample is in a liquid state.
4. The carrier of claim 1, wherein the cartridge holder is configured to releasably couple to the carrier.
5. The carrier of claim 4, wherein the cartridge is partially released from the cartridge holder when the cartridge holder is coupled to the carrier.
6. The carrier of claim 4, wherein the cartridge is fully released from the cartridge holder when the cartridge holder is decoupled from the carrier.
7. The carrier of claim 4, wherein the one or more porous matrices are removable from the opening of the dumber when the cartridge holder is decoupled from the carrier.
8. The carrier of claim 1, wherein the cartridge assembly further comprises a gasket configured to close the opening and seal the chamber when the cartridge holder is coupled to the carrier.
9. The carrier of claim 8, further comprising a desiccant in the chamber.
10. The carrier of claim 9, wherein the desiccant comprises silica gel.
11. The carrier of claim 9, wherein the desiccant and the sealing of the chamber collectively aid in improving a stability of one or more components of the blood sample when the blood sample is being stored in the chamber.
12. The carrier of claim 1, further comprising: a retention mechanism configured to engage with at least one mating feature on the cartridge to secure the cartridge within the chamber.
13. The carrier of claim 12, wherein the retention mechanism and the release mechanism collectively provide a dual support-release mechanism.

14. The carrier of claim 13, wherein the dual support-release mechanism permits the cartridge holder to be removed from the carrier while the cartridge is secured in place within the chamber.
15. The carrier of claim 12, wherein the cartridge holder is releasably coupled to the cartridge via spring clips, and the release mechanism is configured to cause the spring clips on the cartridge holder to partially release the cartridge from the cartridge holder.
16. The carrier of claim 15, wherein the release mechanism comprises a first set of posts that pushes apart the spring clips to partially release the cartridge when the cartridge assembly is coupled to the carrier.
17. The carrier of claim 16, wherein the retention mechanism comprises the first set of posts and a second set of posts, wherein the first and second sets of posts contact different portions of the cartridge to constrain the cartridge in the secured position.
18. The carrier of claim 17, wherein at least two of the different portions of the cartridge are non-coplanar with each other.
19. The carrier of claim 17, wherein at least two of the different portions of the cartridge are coplanar with each other.
20. The carrier of claim 17, wherein at least two of the different portions of the cartridge are substantially parallel with each other.
21. The carrier of claim 17, wherein the second set of posts is configured to limit a travel distance of the cartridge into the chamber.
22. The carrier of claim 17, wherein the first set of posts is in contact with laterally opposite side portions of the cartridge.
23. The carrier of claim 22, wherein the at least one mating feature is located on the laterally opposite side portions of the cartridge.
24. The carrier of claim 17, wherein the second set of posts is in contact with a distal portion of the cartridge.
25. The carrier of claim 17, wherein the cartridge comprises a fluid access port, and wherein the fluid access port is disposed between the second set of posts when the released cartridge is stored in the secured position within the chamber.
26. The carrier of claim 1, wherein the carrier is sized and shaped to accommodate user or patient identity (ID) labels.

27. The carrier of claim 1, further comprising: a peelable foil for sealing the opening of the chamber prior to coupling the cartridge assembly to the carrier.
28. The carrier of claim 27, wherein the peelable foil is configured to protect the chamber of the carrier from moisture and contamination prior to use of the carrier for storing and transporting the blood sample.