Introduction:
Blood collection is increasingly being performed with short peripheral IV catheters. One concern with this practice is the potential for hemolysis to occur. Hemolysis happens when the wall of the red blood cells rupture releasing their contents into the surrounding plasma.

The BD Insyte™ Autoguard™ BC (IAG BC) Shielded IV Catheter has the benefit of blood control technology which reduces the risk of blood exposure during a peripheral IV catheter placement.\(^1\) However, the addition of the blood control technology does not increase the potential for hemolysis with blood collection in comparison to the BD Insyte™ Autoguard™ (IAG) catheter.

Methods:
A typical method for collecting blood from a peripheral IV catheter is to connect a Luer locking tube holder directly to the catheter hub and collect the specimen directly into the vacuum tube. The BD Vacutainer® Luer-Lok™ Access Device was used for collection in this hemolysis testing. The collected sheep blood was centrifuged and then analyzed using a photo spectrometer to measure the amount of hemolysis. The same lot of sheep blood was used for each gauge comparison, 18 gauge through 22 gauge.

Results:
The results show no statistical differences between IAG BC compared to IAG with respect to hemolysis. The evidence suggests that there is no greater risk of hemolysis when drawing blood through IAG BC when compared to IAG. It could also be said that the same level of hemolysis performance is expected using either the blood control or non-blood control versions of the BD Insyte Autoguard device.

Figures 1, 2, and 3 show the interval for the average hemolysis amount between the IAG BC and IAG for 18 gauge, 20 gauge and 22 gauge, shown in milligrams of hemoglobin per deciliter (mg Hgb/dL).

Conclusions:
Each of the figures shows that the average intervals between the IAG and IAG BC are overlapping, thus indicating that the two groups are statistically indistinguishable from one another for each gauge size. The IAG BC is expected to perform as well as the IAG with respect to potential for hemolysis during blood draw.


Testing Completed Under BD Protocol 10611
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