

How to make dried blood dots for genetic studies

If a vertebrate is in-hand, and blood being taken, it is easy to make both a blood smear and dried blood dots. Modern research on malaria parasites demands that BOTH a blood smear and blood samples be taken. Blood can be stored in lysis buffers of various kinds, but we prefer simply to store the blood on filter paper.

1. Take one or few drops of blood and put onto filter paper (100% cellulose that should not alter the structure of the DNA). Several dots can be made per filter paper disk. A life-size drawing is provide below and photographs on the website.
2. Write the identification number for each sample on the filter paper disk, and the site and date in the middle. Use pencil!
3. Air dry.
4. Put the disk into a zip-lock plastic bag with some silica gel Push out all the air so that the bag is flat.
5. If space is limited, and the plastic bags become too numerous, multiple disks can be stored in a bag provided a blank, clean filter paper disk is placed between papers with the dried dots, and the dots are DRY.
6. These bags with disks can be kept at ambient temperatures until returning to the lab, and then they should be placed into a freezer (-20 C).
- 8 To extract DNA, remove the bag from the freezer and allow it to reach room temperature. This is important to prevent water from distilling onto a cold disk and thus wetting the dried blood. Cut a piece of a dried dot using a razor blade (we do two cuts per blade by using each edge, then discard the blade to prevent contamination).
8. Source: Whatman Filter paper 7 cm (usually #4, but other densities can be used).

The drawing below is approximately life sized. Writing on the filter paper should be in pencil.

