Preparation of experimental dried blood spots

To assess the diagnostic accuracy of the g-iELISA on dried blood spots (DBS), experimental DBS were prepared as follows.

Venous blood was taken on heparin from a trypanolysis-negative O+ donor and divided into 500 μ l volumes in microfuge tubes. After centrifugation for 10 min at 17,000g and ambient temperature, 250 μ l of the plasma in each tube were replaced by plasma of a gHAT patient or an endemic control. With each blood sample, 6 volumes of 70 μ l were spotted on Whatman 4 filter paper, dried overnight at ambient temperature and stored in plastic bags with silica gel to keep the filters dry until use. As test samples for the g-iELISA, 8 discs of 6 mm diameter were punched out from each filter and eluted overnight in 400 μ l of iELISA sample diluent. In total, we prepared DBS with plasma from 95 gHAT patients from Nord Equateur Province in DRC, all positive in trypanolysis, and from 37 endemic controls from Kwilu Province in DRC, all negative in trypanolysis.