was not possible to analyze several of the specimens, particularly most of the bangles, because they were too large to fit into the analysis chamber. Thus, a total of 16 specimens were analyzed. These comprised 11 beads, which were removed from 9 different strings (necklaces) of beads, 4 bangles (all fragments of different bangles), and the piece of cullet (PR953).

Images of all the beads were shown to Stephen Long, a specialist in modern West African beads, who reported that all of them were typical of Nupe-made beads from Bida with the exception of the translucent beads of PR937, which look like typical, Ghanaian, recycled glass beads from Somanya district, made by Krobo bead-manufacturers. Both Long and another bead specialist, Marilee Wood, stated that none of the beads was made in Europe.

Fig. 1: Linden-Museum / Glass beads from a section of two necklaces; diameter per bead approx. 1 cm; of Nupe origin (Nigeria), but bought by the collector in Abidjan (Ivory Coast) in 1979.
Above (blue-white): *bíkini* glass; Inv.-Nr. F 55.128
Bottom (green-white): mixture of *bíkini* and *kwálaba* glass? Inv.-Nr. F 55.127

In addition to the Linden-Museum specimens, five other specimens, collected by one of us (James Lankton) in Bida in 1998, were also analyzed, at the Field Museum (FM) in Chicago. These specimens comprised a lump of cullet (BD-01), two black beads (BD-02, 03), a black bracelet (BD-05), and an orange bead (BD-04). All these specimens were purchased in a shop run by *masagá* glass-workers. The bracelet was identified as *bíkini* glass by the *masagá* salesperson, while the lump of cullet appears to have be drawn from the glass in the furnace, based on the parallel striations visible in the glass. Lankton also noted that the glass recovered from the bottom of the furnace was referred to as *bíkini* glass by the *masagá*, but his observations suggested that there could have been variable amounts of recycled glass mixed in with it.

Analytical method

Laser-ablation (LA) coupled to state-of-the-art inductively coupled plasma mass spectrometers (ICP-MS) has gained popularity for materials analysis during the last decade (Speakman and Neff 2005). The advantages of LA-ICP-MS include ease of sample preparation, rapid sample throughput, high spatial resolution, excellent sensitivity, and the capability of measuring isotope ratios. About 50 elements can be measured with relatively good precision in glass using LA-ICP-MS.