Abstract:

A rapid and inexpensive method is described where a small amount of serum or plasma was used as the source of DNA for genetic analysis. Using a silica gel matrix DNA was isolated from 50 μl of archived serum or plasma. The specimens were collected from 13 individuals at two separate time points 3–6 years apart. The polymorphic region of second exon of the MHC class II gene HLA DQA1 was amplified using the polymerase chain reaction (PCR) to sufficient quantities to permit genetic analysis using allele-specific oligonucleotides (ASO). Allelic typing of each specimen was performed and the reproducibility of the method was demonstrated in that in all 13 cases the two independently isolated specimens produced the identical ASO binding patterns. No qualitative difference was noted in the amplified product generated from plasma or serum. This study demonstrates (a) that minute amounts of serum or plasma are able to provide sufficient quantity and quality of DNA to permit genetic analyses (b) and that the source of serum can be archived for many years.