1.0 Background

In 2008 The National Blood Service ceased the provision of serum as a commercially available product. The only alternative was citrated plasma which was used as the matrix for KEQAS Standard Reference Material 001 (SRM-001). This material was despatched to sixteen groups by courier. They were asked to analyse the material ten times in one run and return their results to us, fifteen groups returned results. The mean distance travelled was 3793 miles (range = 0 – 11783 miles), the mean time in transit was 46 hours (range = 0 – 236.5 hours).

Samples were not shipped on ice but were left at the ambient temperatures exposed to during transit. Therefore investigation of possible sample deterioration during transit is an essential validation step for KEQAS.

At this time serum purchased from the Dutch Blood Service (Sanquin) is used to prepare KEQAS samples. Therefore this document only applies to SRM-001 and should not be used directly to indicate stability of the serum samples currently distributed by KEQAS. Please see HT-KEQ-157 for more details on serum stability.

2.0 Related documentation

HT-KEQ-MP-002: KEQAS staff induction and training
HT-KEQ-158: Citrated plasma stability document
HT-KEQ-SOP-001: KEQAS sample preparation
HT-KEQ-017: KEQAS sample inventory

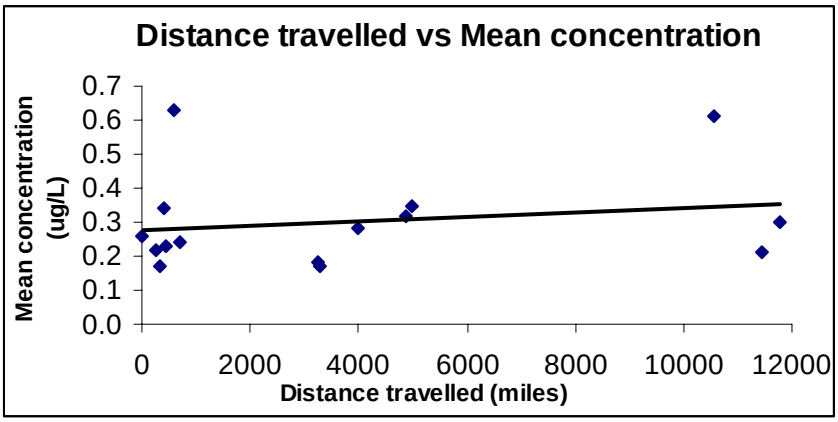
3.0 Procedures

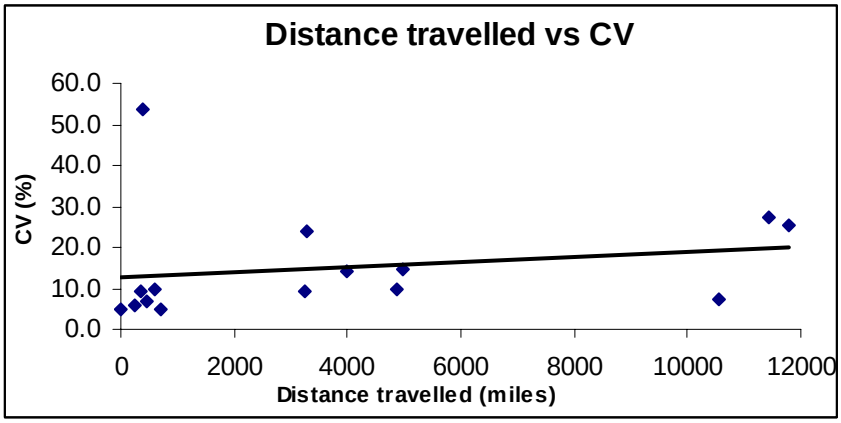
The following experiments were carried out in order to investigate stability of KEQAS samples during transit to participants and during the year when stored appropriately prior to analysis.

Investigation 1: Comparison of laboratory performance with distance travelled by samples

Method: Approximate distance travelled was plotted against each group's mean sample concentration for SRM-001 and against each groups' coefficient of variation for the ten sample analyses carried out.

Results:



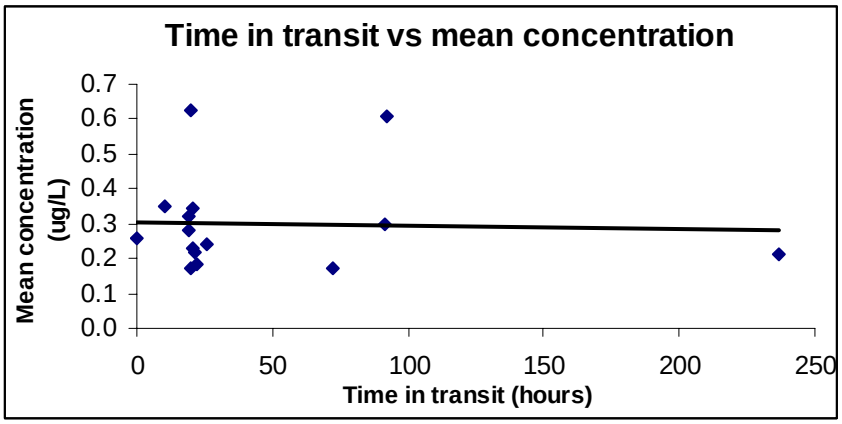


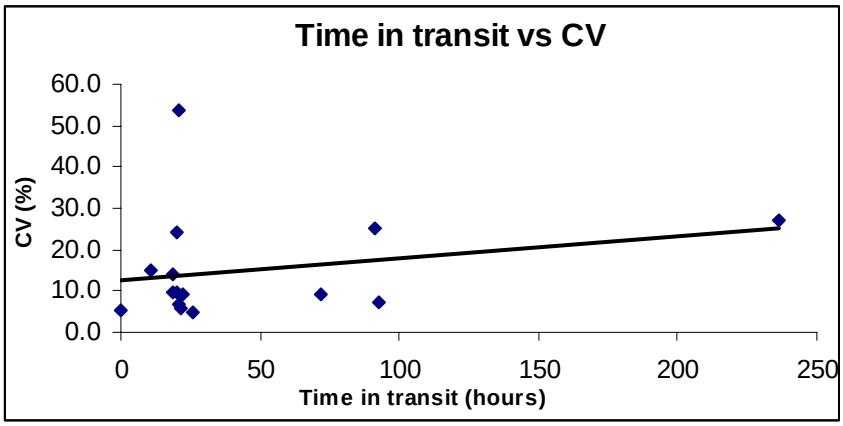
Conclusion: There is no evidence to suggest that distance travelled adversely effects laboratory performance.

Investigation 2: Comparison of laboratory performance with time spent by samples in transit

Method: Time in transit was plotted against each groups' mean sample concentration for SRM-001 and against each groups' coefficient of variation for the ten sample analyses carried out.

Results:





Conclusion: There is no evidence to suggest that time in transit adversely effects laboratory performance.