Fig. S1: Peak scan in the medium-resolution mode of the SRM-3141a solution at 200 ng/mL (K 200 ppb) using the set of parameters given in Table 1 showing the peak shape of the *m/z*-values 39 and 41 (blue and red, respectively) with the automated calculation of the resolution (5 95% of *m/z*-value 39) on the ascending edge of the peak.

<u>Fig. S2</u>: Peak scan in the low-resolution mode of the SRM-3141a solution at 200 ng/mL (K 200 ppb) using the set of parameters given in Table 1 showing the absence of ³⁸Ar.

<u>Fig. S3</u> Peak scan in the low-resolution mode of the SRM-3141a solution at 200 ng/mL (K 200 ppb) using the set of parameters given in Table 1 showing the absence of interference on ⁴⁰Ca.

<u>Table S1</u>: Details of the K isotope composition (δ^{41} K) of the CRM measured in the present study with the number of replicated ion-chromatography procedures.