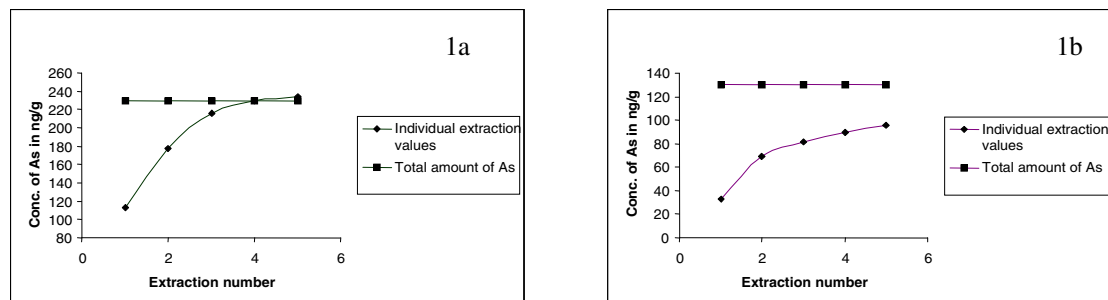


Supplementary 1



Supplementary Figure 1. Carrot 1 (1a) and carrot 5 (1b) subjected to five step extraction with hot water and analyzed for As in individual steps compared to total amount of As (As_T)

Determination of appropriate number of extraction cycles using 60°C water

Water heated to 60°C was used as an extraction medium to obtain arsenic species from carrots. To determine the amount of arsenic extracted into the extractant, acidified extracts were analyzed by standard addition using Ge as internal standard. Hot water extraction on two carrots, carrots 1 and 5, was conducted for five cycles each and the amount of arsenic extracted was compared to that of As_T present. It was observed in both cases that the amount of arsenic extracted plateaus after third extraction cycle, indicating that the first three extraction cycles remove most of the extractable arsenic. The next two extraction cycles result in extraction of insignificant amount of arsenic. Therefore, for the rest of the carrot samples, three extraction cycles were utilized. Since each sample was re-extracted at least three times, the cumulated value of arsenic in all extracts is represented as concentration of total arsenic extracted ($As_{T,E}$) (Table2, column4).

Deleted: was compared