

### Abstract:

Nitrate content in vegetables is concerned with food safety. There are many nitrate determination methods. Simple methods using RQflex and pIE can be available in the field. On the other hand, separation methods using HPLC and CE can be available in a laboratory. But absolute values of nitrate content among these determination methods may be different. When the dilution rate was fixed 100-fold, the values were  $pIE \geq RQflex > HPLC = CE$ . The pIE- and RQflex-determined value of 100-fold dilution were higher than those of 50-fold dilution, respectively. These results mean that nitrate concentration determined using RQflex and pIE can be changed by diluting. A old pIE was easy to measure higher than a new pIE in the high concentration range. The response of the old pIE was slow. CE was recommended to determine with 100-fold dilution at 24 °C in the auto-sampler that the determined value coincided with HPLC value with almost no bias. These results should be considered to determine nitrate content.