

<b>Posting type</b>	Advisory
<b>Subject</b>	Changes in sodium data quality
<b>Module/Species</b>	A/ Na
<b>Sites</b>	entire network
<b>Period</b>	Starting 12/1/2001
<b>Recommendation</b>	Consider Cl <sup>-</sup> ion and non-crystal Sr as alternative <a href="#">markers for sea salt</a> .
<b>Submitter</b>	W.H. White, white@crocker.ucdavis.edu

### Supporting information

The light elements in samples collected since 1 December 2001 have been determined by X-Ray Fluorescence (XRF). In earlier samples, those elements were determined by Proton-Induced X-ray Emission (PIXE). The XRF analysis is much less sensitive for sodium, the lightest of the elements reported (Figure 1). Sensitivities improved for 2005 and later samples with the conversion of the XRF system to vacuum operation, but are still below those from PIXE (Figure 2).

Figure 1. A portion of the spectra obtained by PIXE and the vacuum XRF system for a sodium chloride calibration standard. Spectra are normalized to the chlorine peak height.

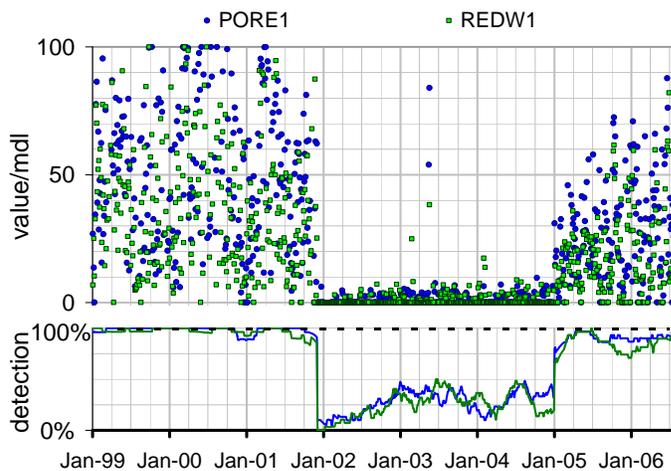
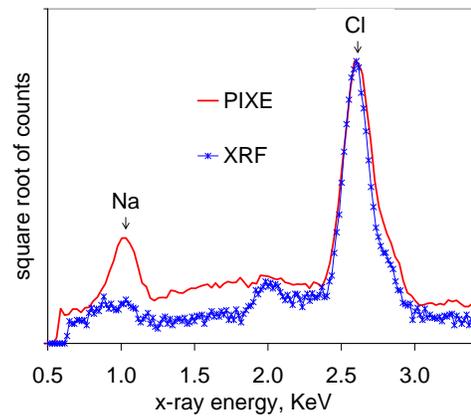


Figure 2. Detection multiples (value/mdl) and rates (in a moving 31-sample window) for sodium, at two sites that consistently experience sea salt.