ESRF	**Experiment title:** Ion condensation in a polyelectrolyte gel	**Experiment number**: 02-01-1222
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Summary: Anomalous small angle X-ray scattering is used to determine the distribution of divalent ions in a neutralized polyelectrolyte gel of sodium polyacrylate in the vicinity of the volume transition. At the five different energies of the incident beam used to vary the contrast, the scattering curves have similar shapes, and are separated only by constant multiplying factors. This result, in conjunction with the SANS results from the same sample, indicates that the divalent ion (strontium) is confined on the polymer backbone.