

**ELECTROLYTIC PHASE EXTRACTION: AN OLD TECHNIQUE TO EVALUATE
PRECIPITATES IN NITINOL**

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Nitinol is an inter-atomic compound/alloy with a composition of 50 atom percent each of Ni and Ti. There is an increasing solubility range on the Ni rich side that results in a precipitation reaction and slight matrix composition adjustment. The unique shape-memory properties have been used in biomedical applications for more than a decade. Careful precipitation heat treatment can shift the phase transformation temperatures to achieve an optimum temperature range for a particular application. Electrolytic phase extraction was utilized to evaluate the secondary phases that are present in the alloy and subsequently analyzed using powder x-ray diffraction and Rietveld analysis.