

## Powder X-ray diffraction patterns of all four NiZn samples

## FT-IR spectra of all four NiZn samples





## Powder X-ray diffraction patterns of calcined chloride sample



## **Powder X-ray diffraction patterns of calcined bromide sample**



## Powder X-ray diffraction patterns of calcined carbonate sample



# **Powder X-ray diffraction patterns of calcined nitrate sample**