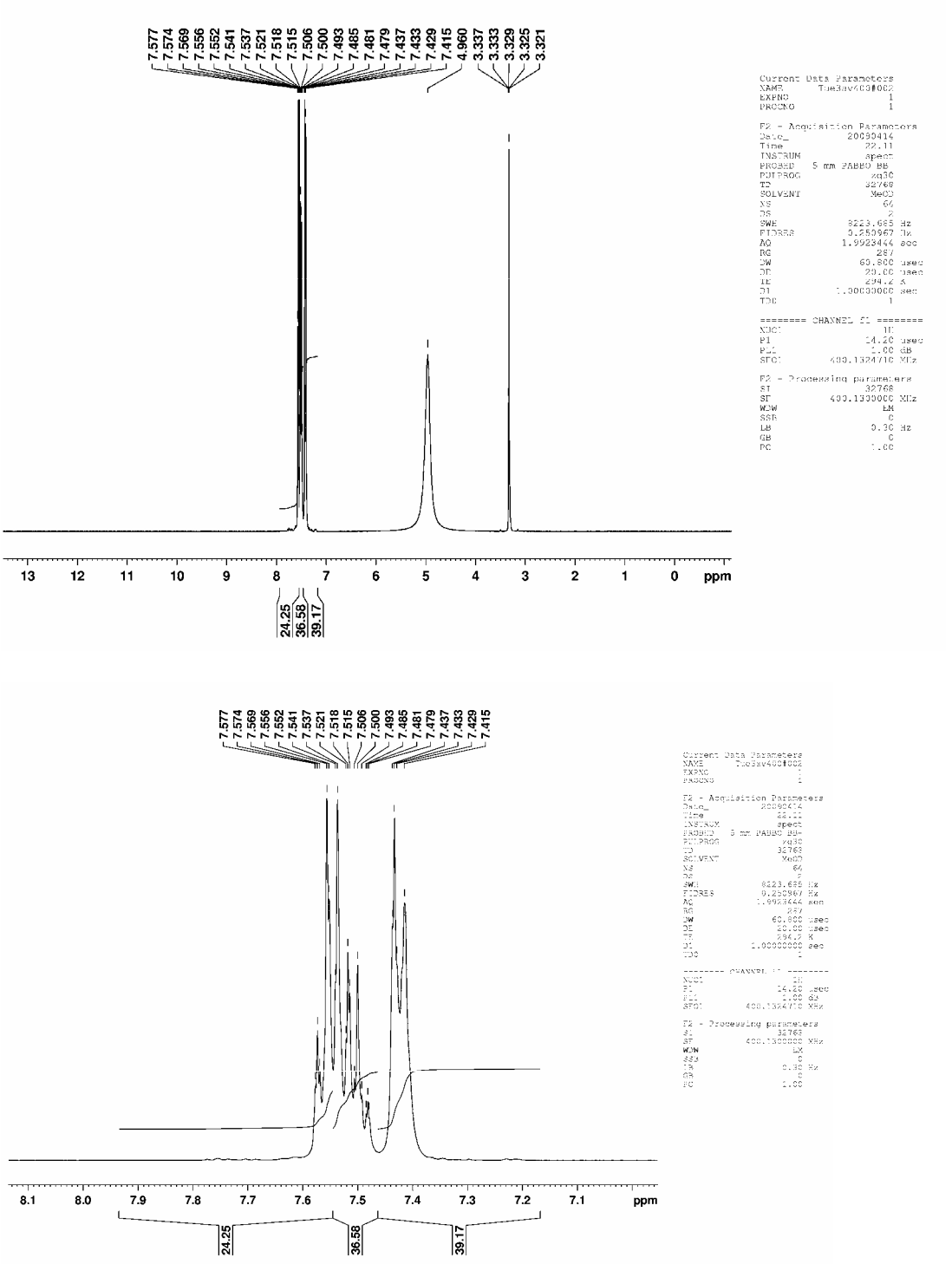
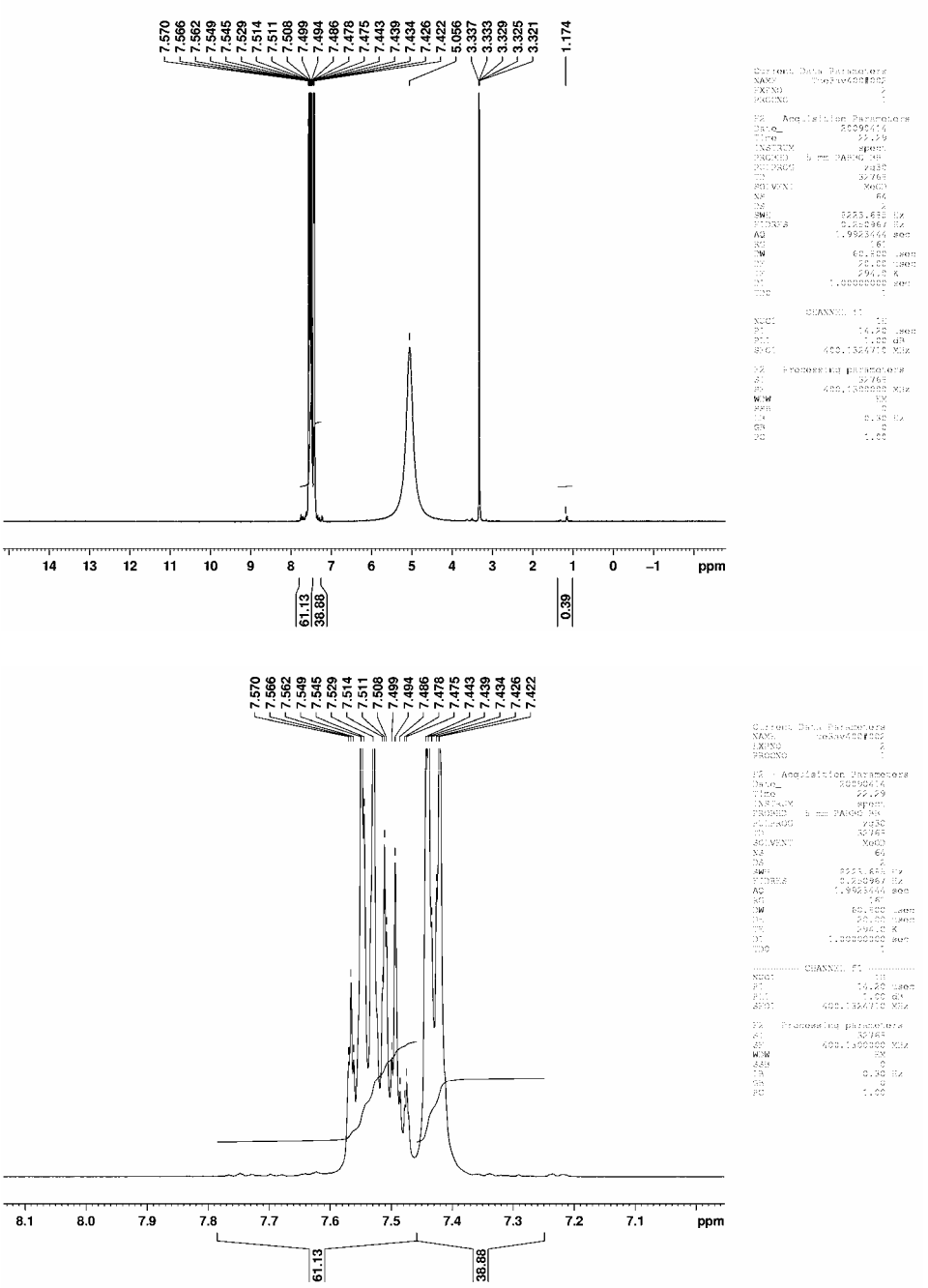
Supporting Information:

1. Liquid state ^{1}H NMR Spectra in MeOD for (a) $AnHNO_3$-II (b) $AnHNO_3$-I
2. Solid state NMR- ^{13}C CP MAS for (a) $AnHNO_3$-II (b) $AnHNO_3$-I
3. Powder X-ray diffraction data for different crystals of $AnHNO_3$.
4. FT-IR spectra of $AnHNO_3$-I and II
5. Powder X-ray diffraction data for $AnHNO_3$-I, after heating at 110 ºC
6. DSC thermogram- $AnHNO_3$-I: repeated heating and cooling cycles.
7. SEM images of $AnHNO_3$-I showing pores on the surface.
8. Powder X-ray pattern for amorphous Alumina.
9. Solid state ^{27}Al NMR on Alumina



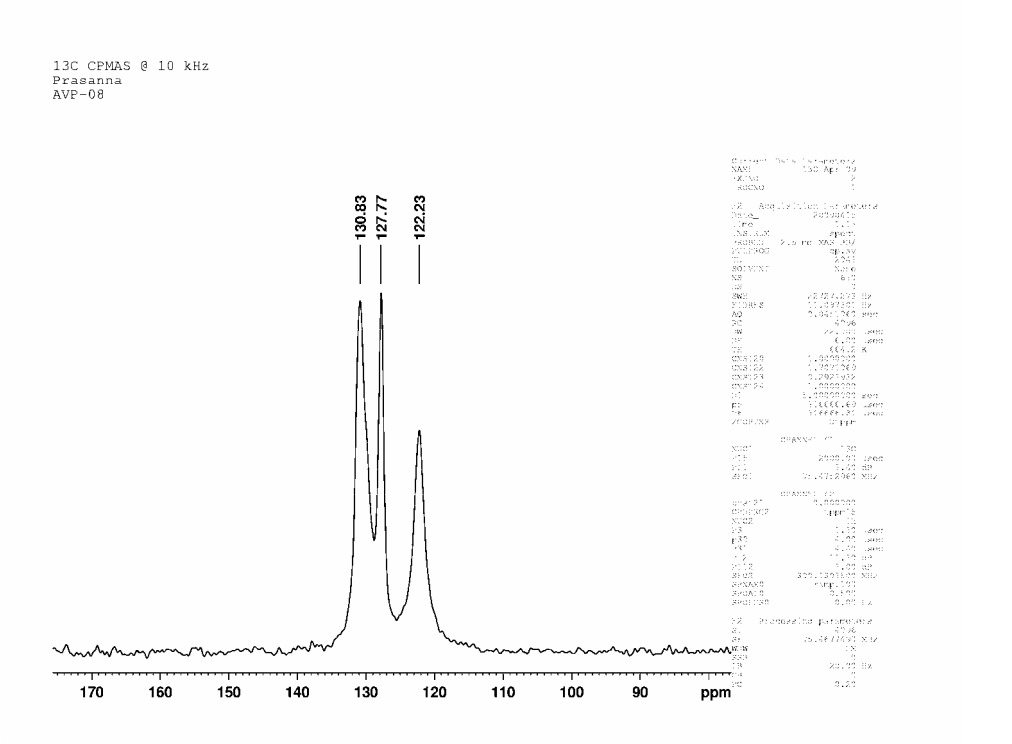
(a)

Figure 1. Liquid state ^{1}H NMR Spectra in MeOD for (a) $AnHNO_3$-II (b) $AnHNO_3$-I



(b)

Figure 1. Liquid state ^{1}H NMR Spectra in MeOD for (a) $AnHNO_3$-II (b) $AnHNO_3$-I



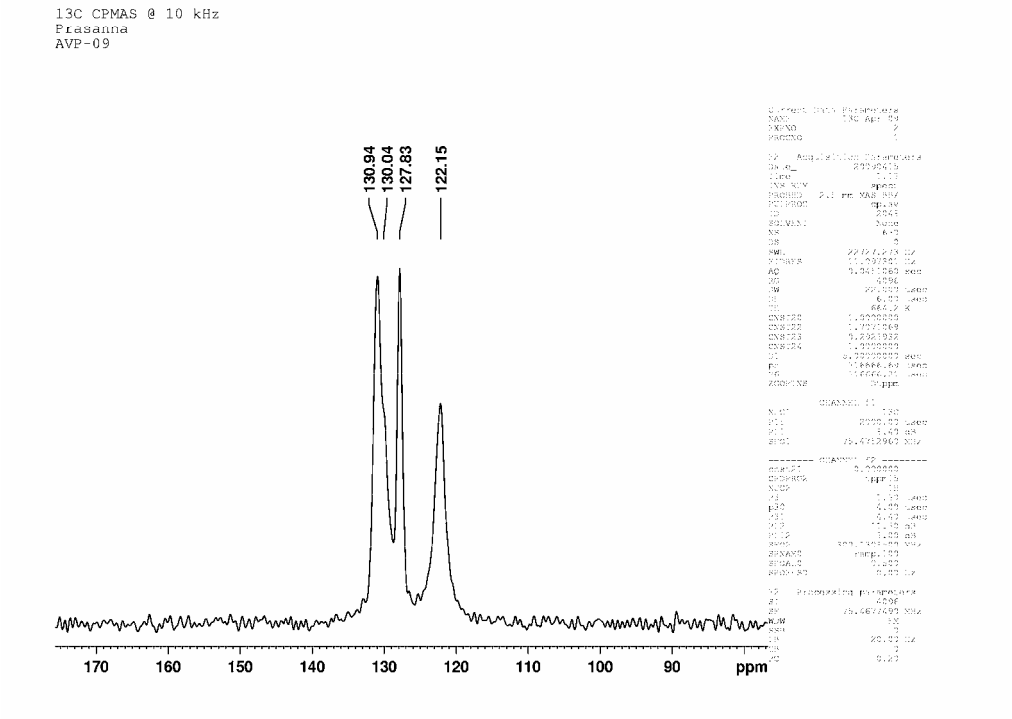
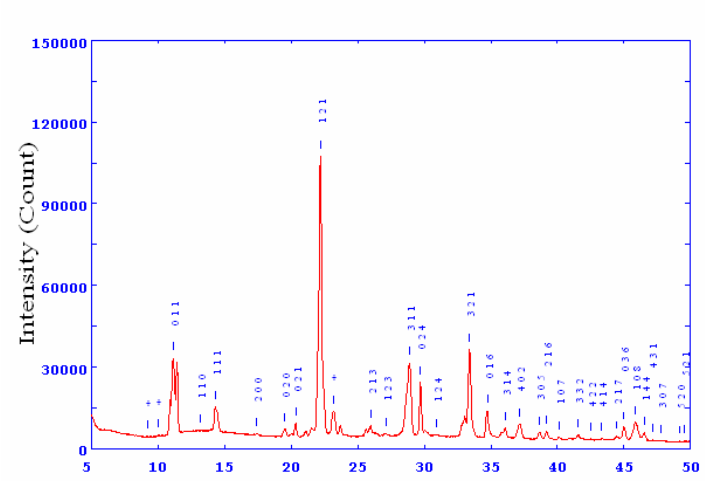
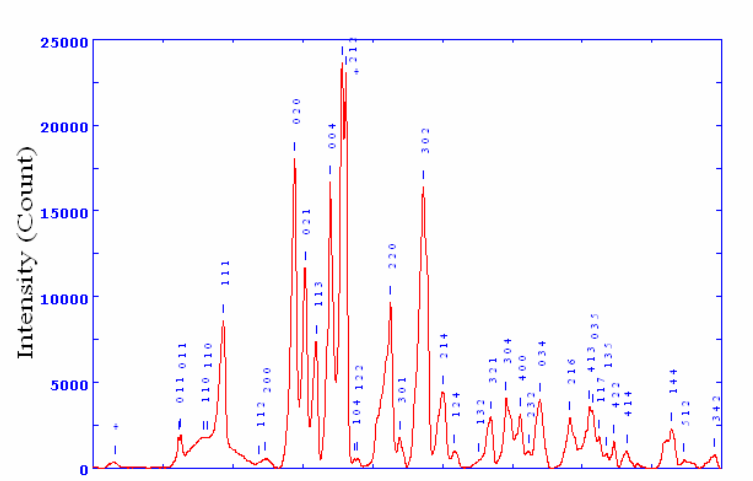


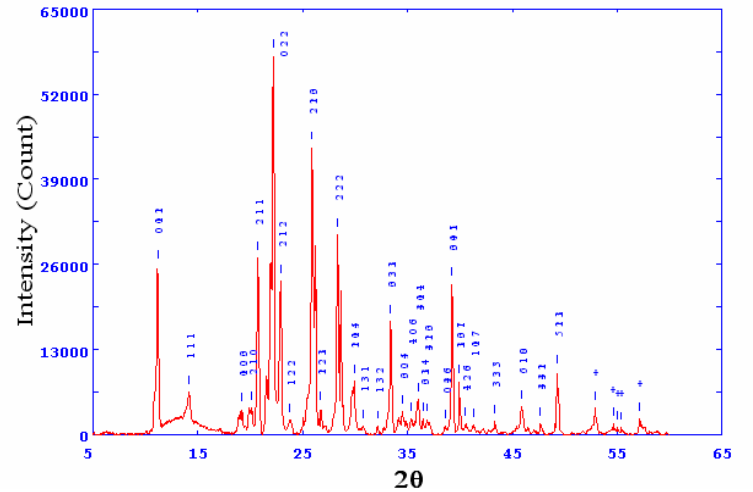
Figure 2. Solid state NMR- ^{13}C CP MAS for (a) $AnHNO_3$-II (b) $AnHNO_3$-I



$ANHNO_3$- II



$ANHNO_3$-I



$ANHNO_3$-III

Figure 3: Powder X-ray diffraction data for different crystals of $AnHNO_3$.

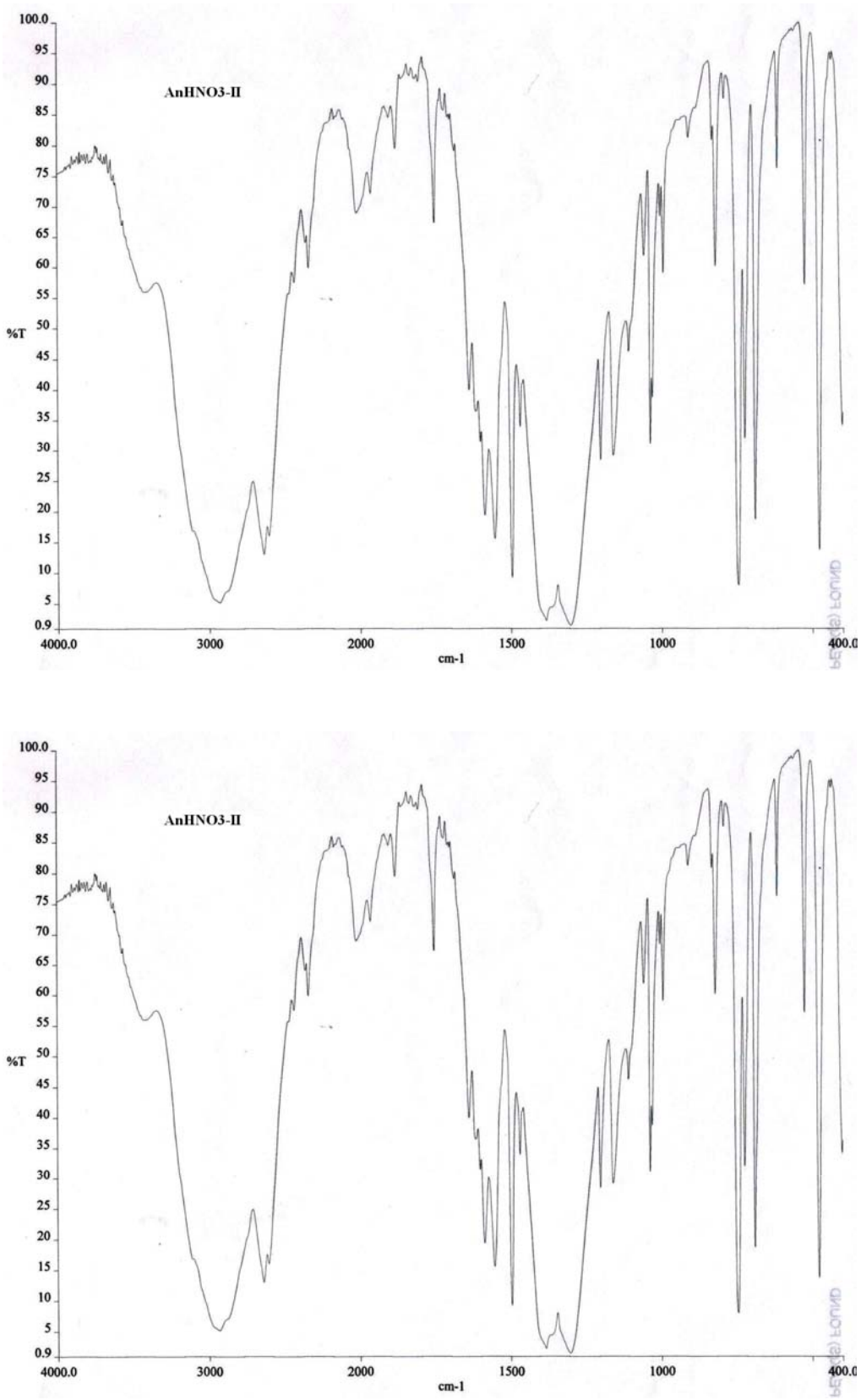
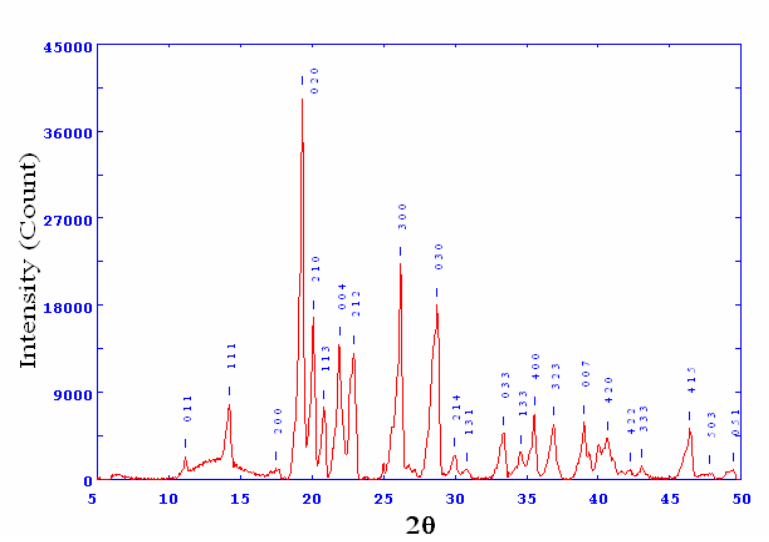
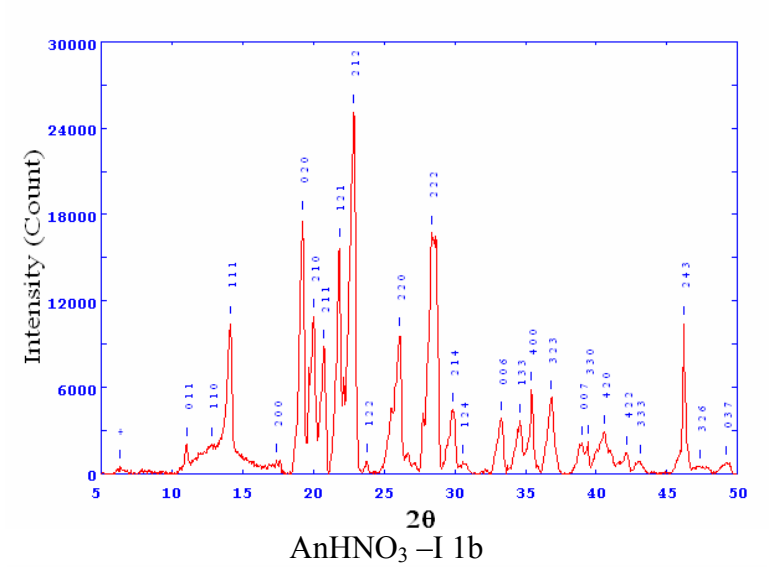


Figure 4. FT-IR spectra of $AnHNO_3$-I and II

$AnHNO_3$ –I



$AnHNO_3$ –I 1a



$AnHNO_3$ –I 1b

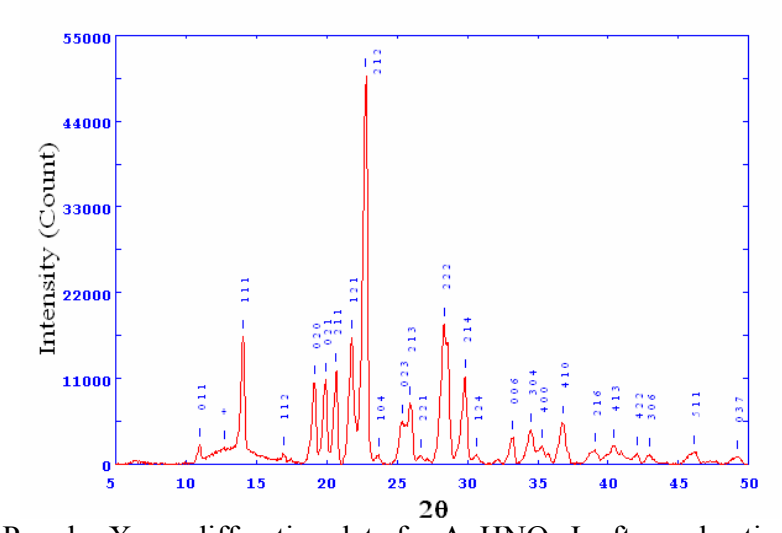


Figure 5. Powder X-ray diffraction data for $AnHNO_3$-I, after re-heating at 110 ºC

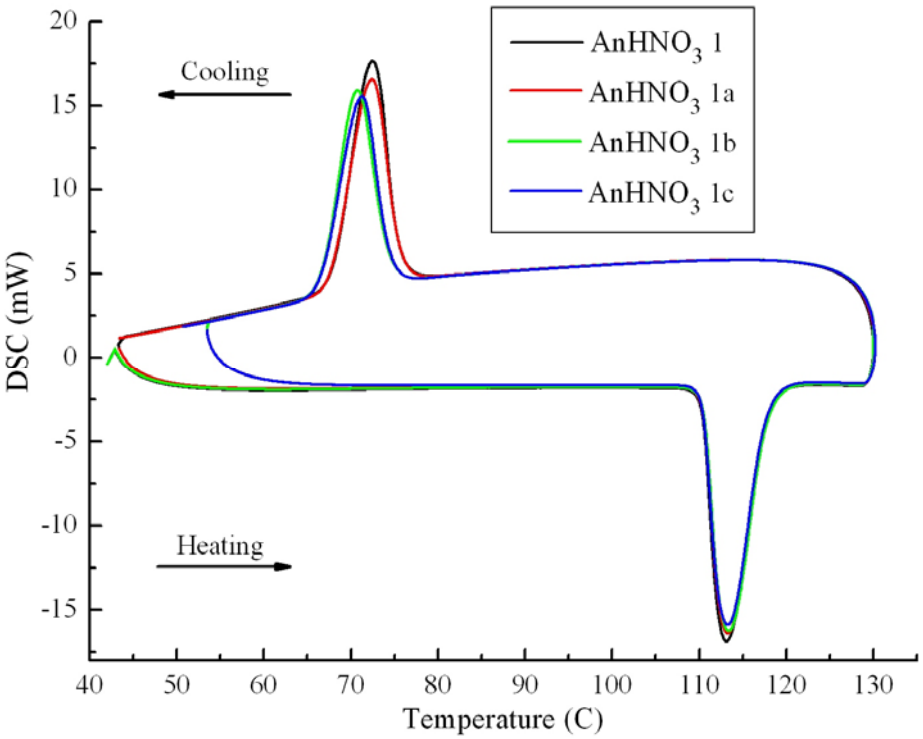


Figure 6: DSC thermogram- $AnHNO_3$-I: repeated heating and cooling cycles. 1a,1b,1c shows repeat cycles.

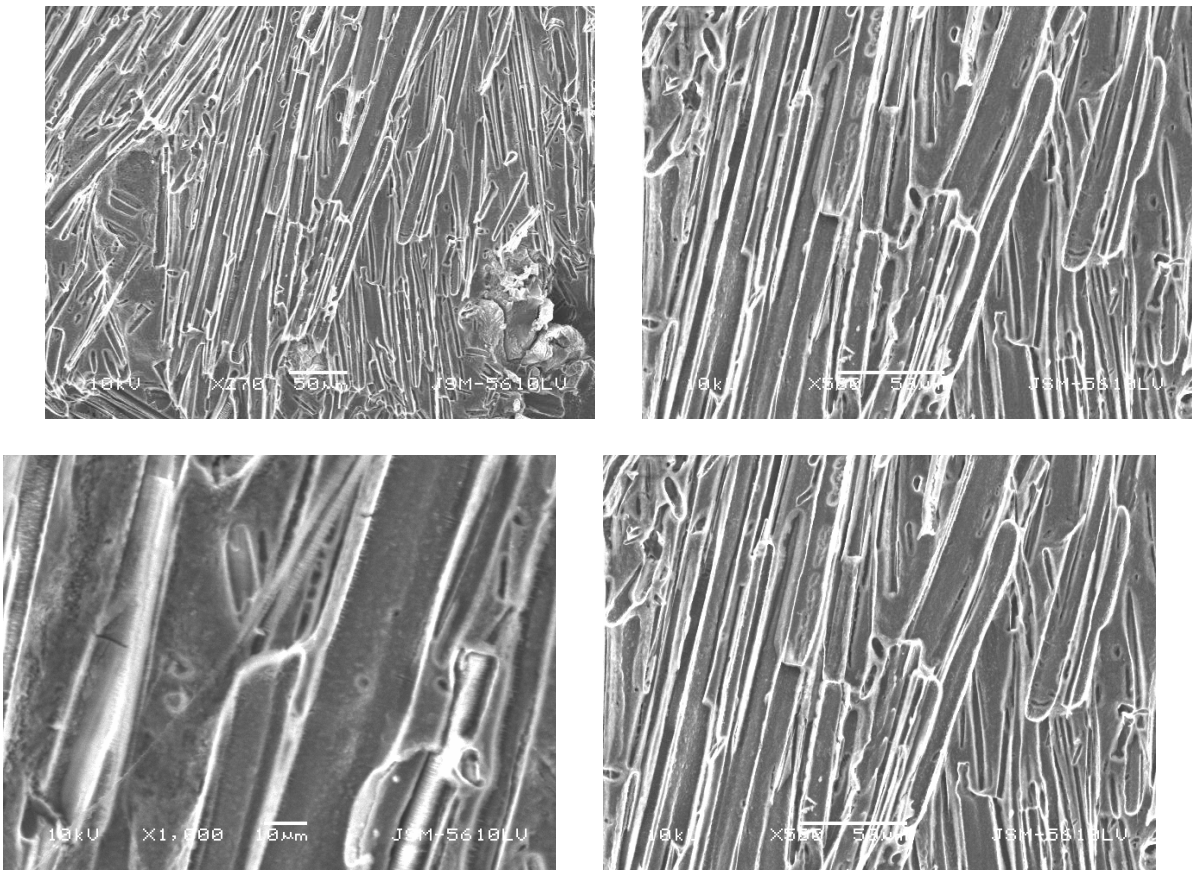


Figure 7. SEM images of $AnHNO_3$-I showing pores on the surface of the tubes.

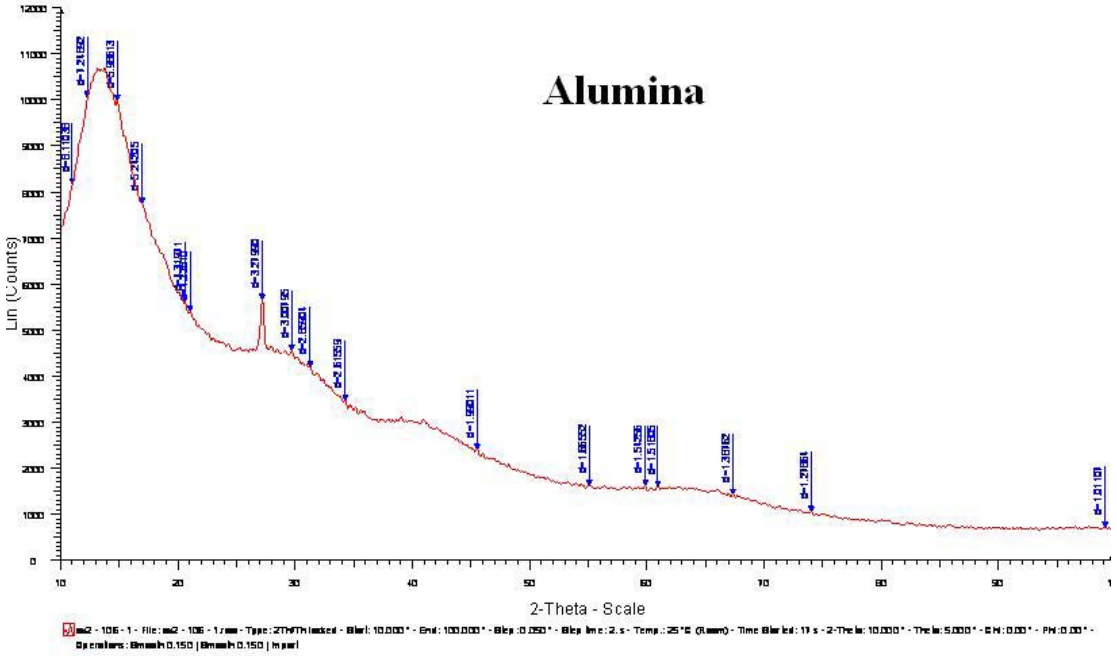


Figure 8: Powder X-ray pattern on amorphous Alumina.

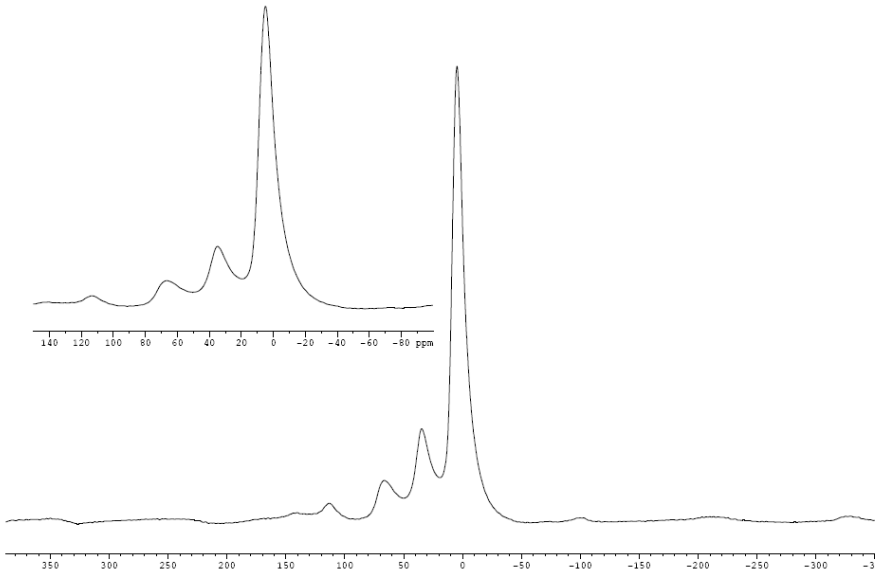


Figure 9: ^{27}Al NMR spectra recorded at MAS frequency of 10kHz.