

Supplementary data

FTIR Spectra of microplastics before and after treatment with various concentrations of reagents at selected digestion temperatures and durations

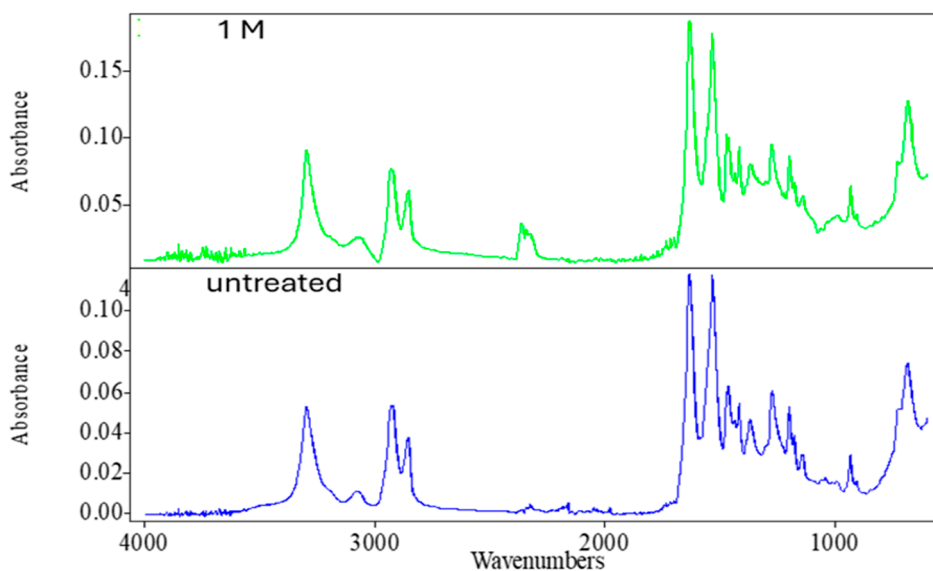


Fig S1: Spectra of PA before and after digestion using 1 M & 10 M HNO₃ at 30°C and 60 mins

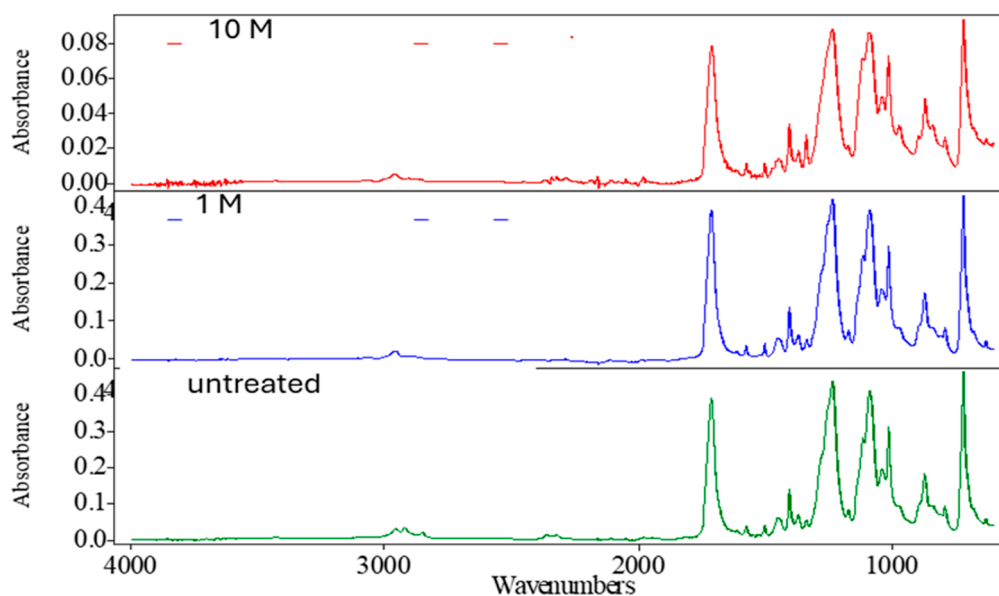


Fig S2: Spectra of PET before and after digestion using 1 M & 10 M HNO₃ at 30°C and 60 mins

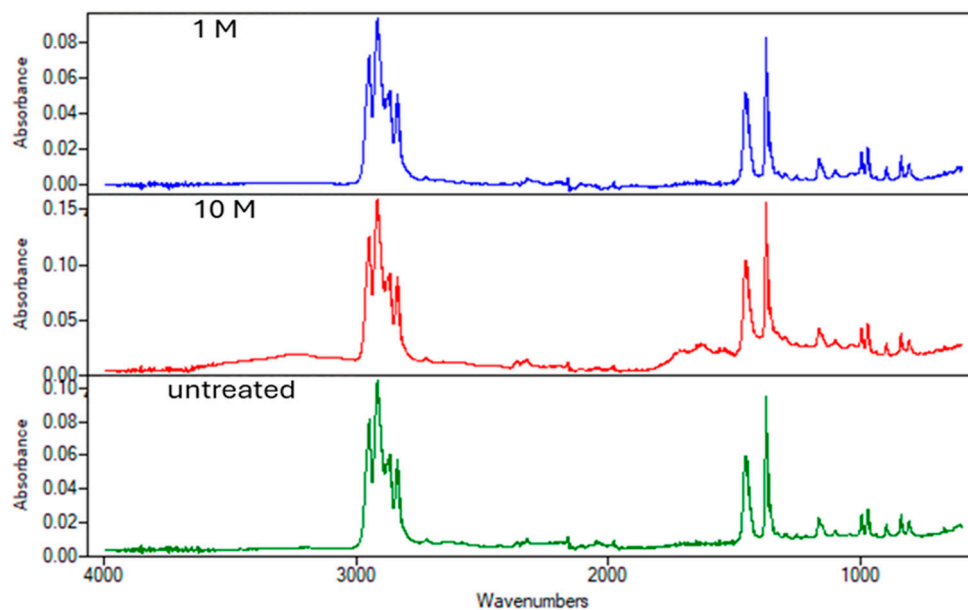


Fig S3: Spectra of PP before and after digestion using 1 M & 10 M HNO₃ at 30°C and 60 mins

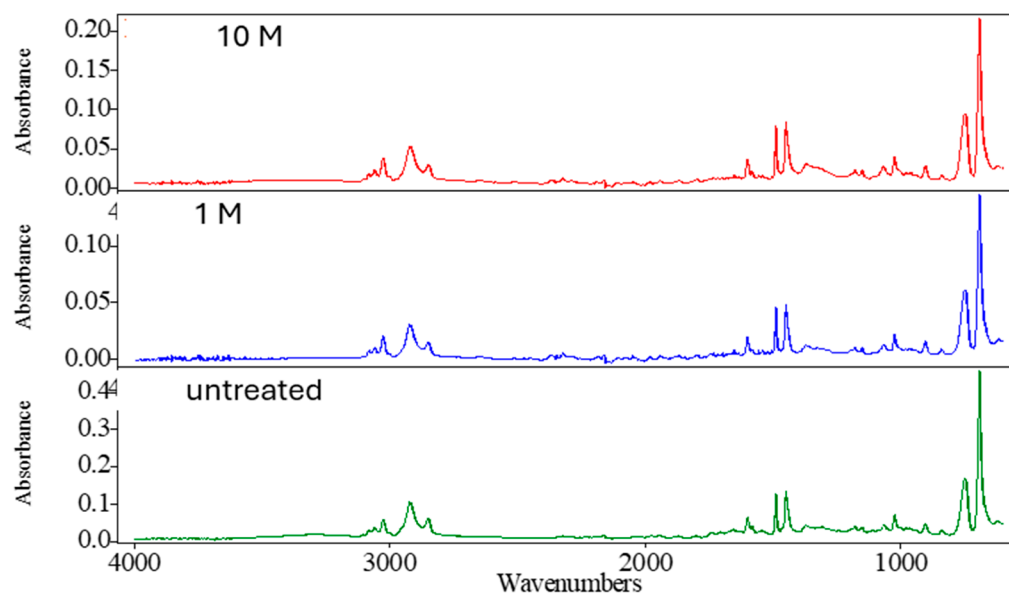


Fig S4: Spectra of PS before and after digestion using 1 M & 10 M HNO₃ at 30°C and 60 mins

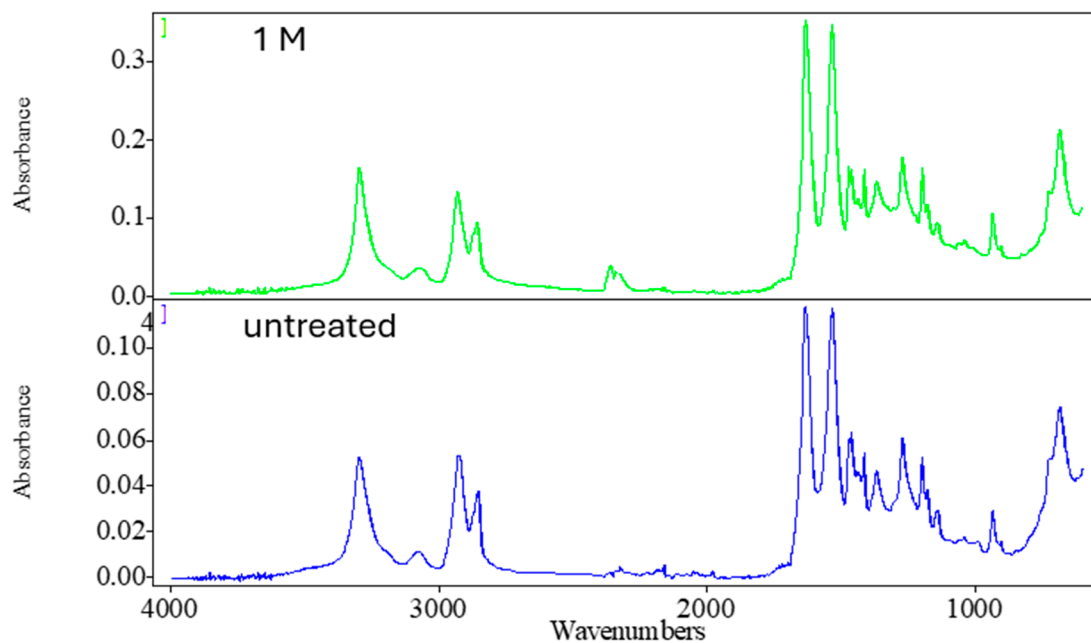


Fig S5: Spectra of PA before and after digestion using 1 M & 10 M HNO₃ at 30°C and 360 mins

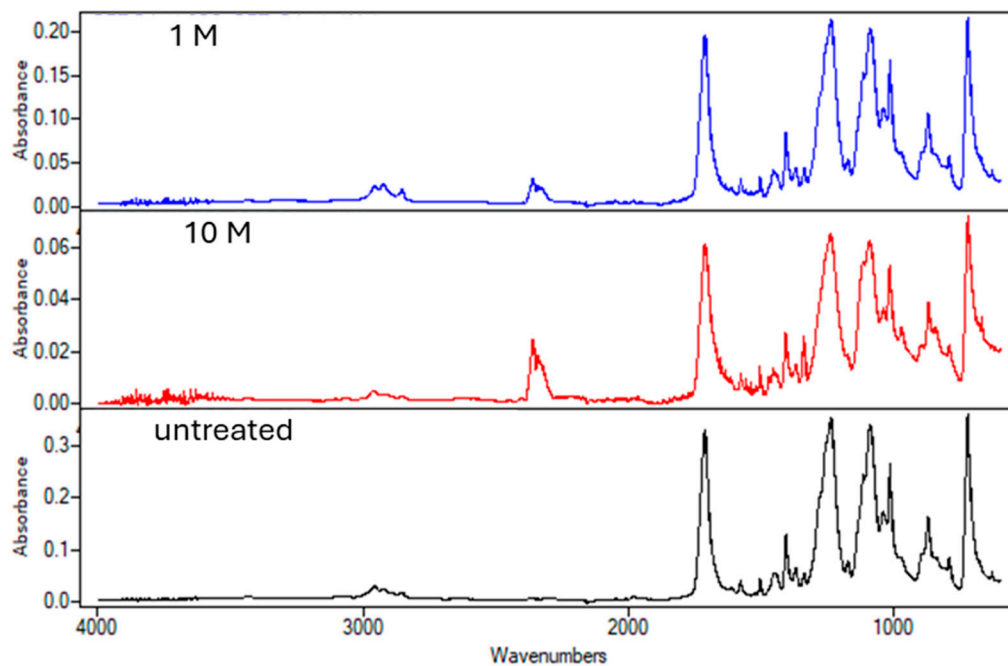


Fig S6: Spectra of PET before and after digestion using 1 M & 10 M HNO₃ at 30°C and 360 mins

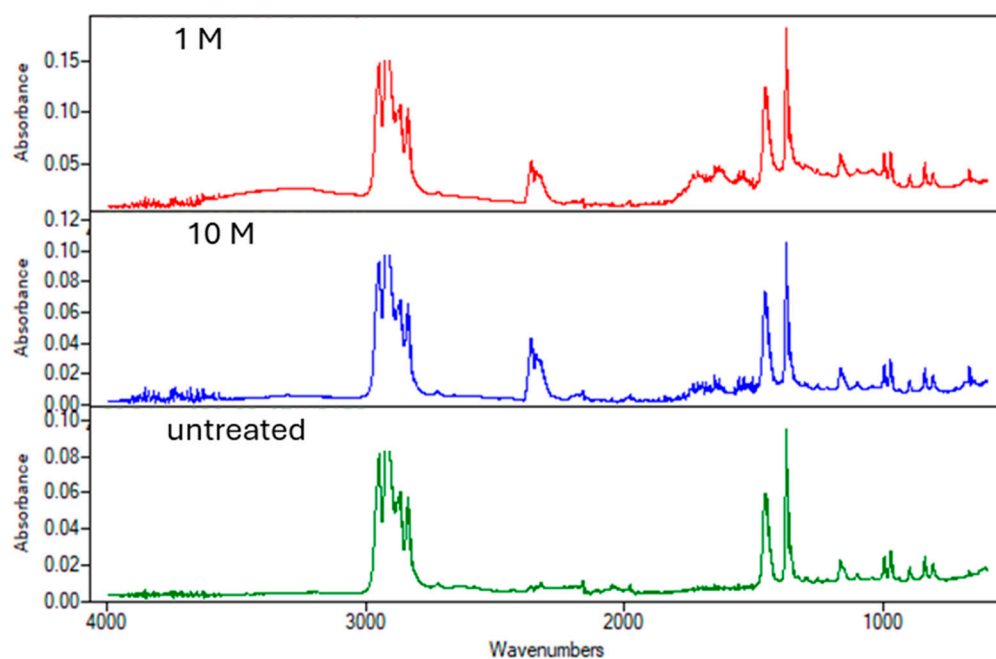


Fig S7: Spectra of PP before and after digestion using 1 M & 10 M HNO_3 at 30°C and 360 mins

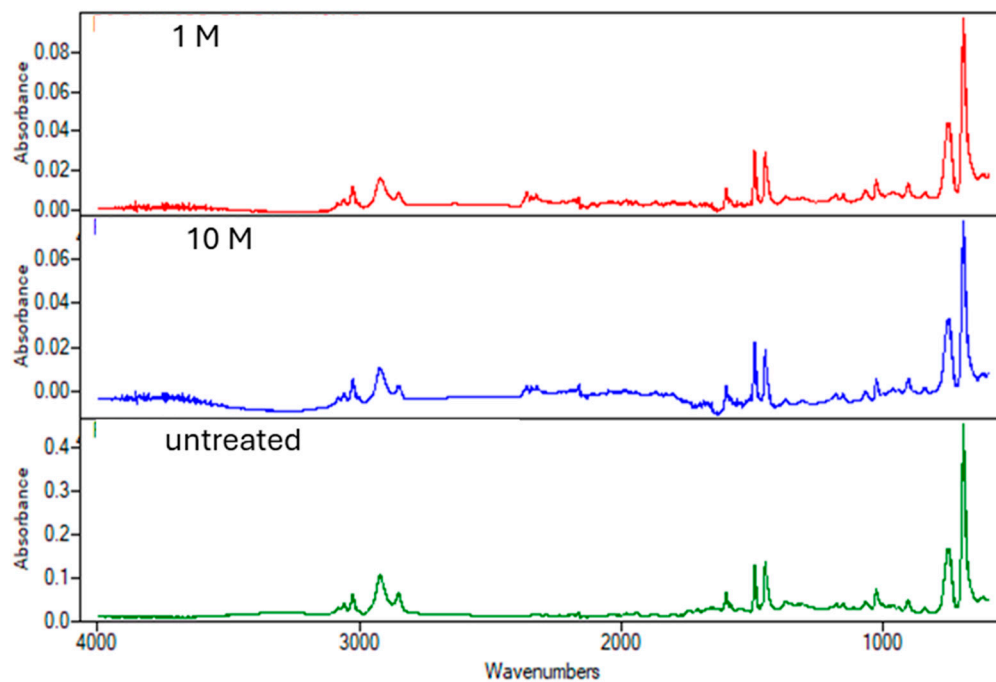


Fig S8: Spectra of PS before and after digestion using 1 M & 10 M HNO_3 at 30°C and 360 mins

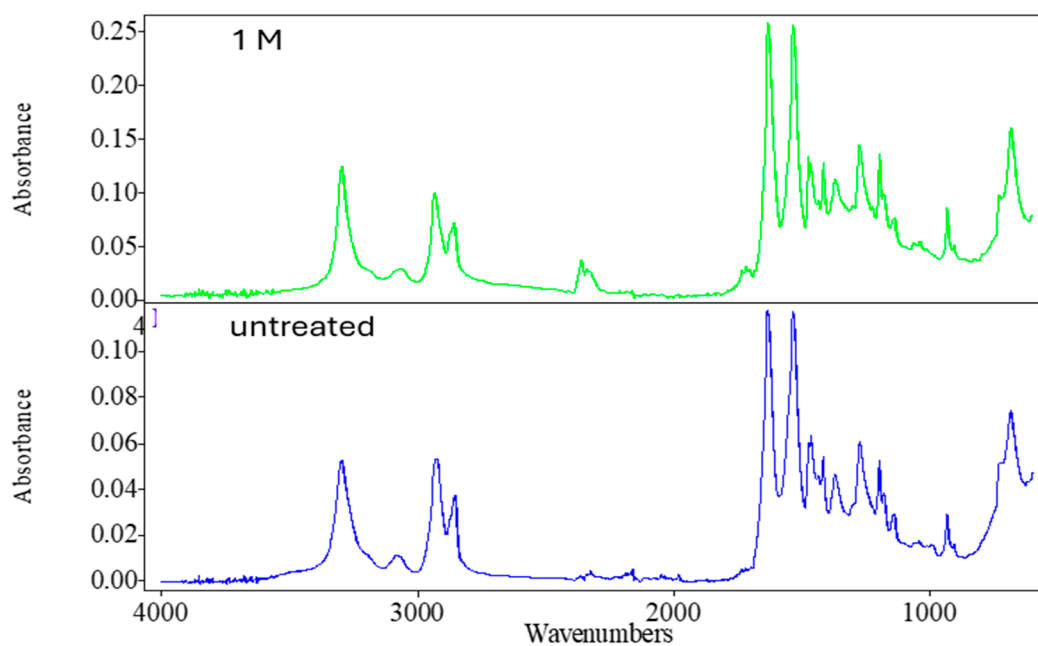


Fig S9: Spectra of PA before and after digestion using 1 M & 10 M HNO_3 at 60°C and 60 mins

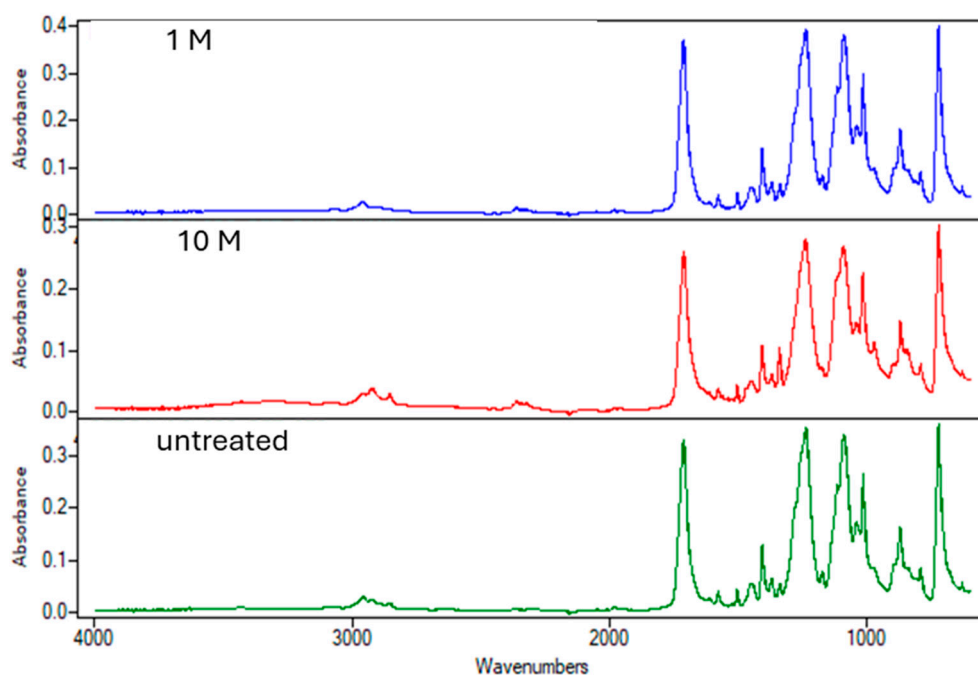


Fig S10: Spectra of PET before and after digestion using 1 M & 10 M HNO_3 at 60°C and 60 mins

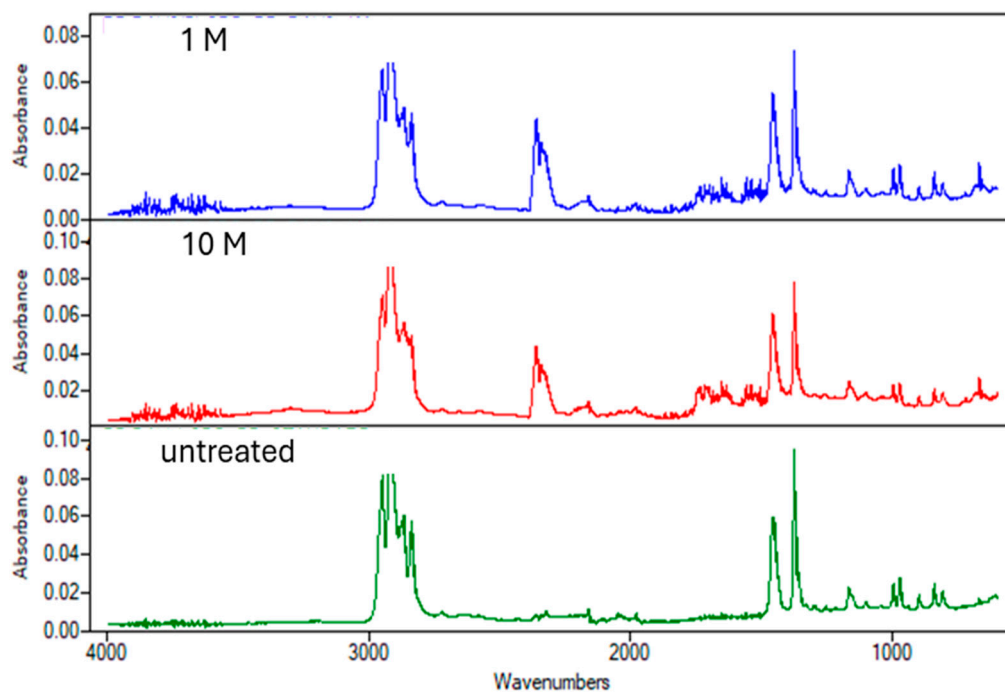


Fig S11: Spectra of PP before and after digestion using 1 M & 10 M HNO₃ at 60°C and 60 mins

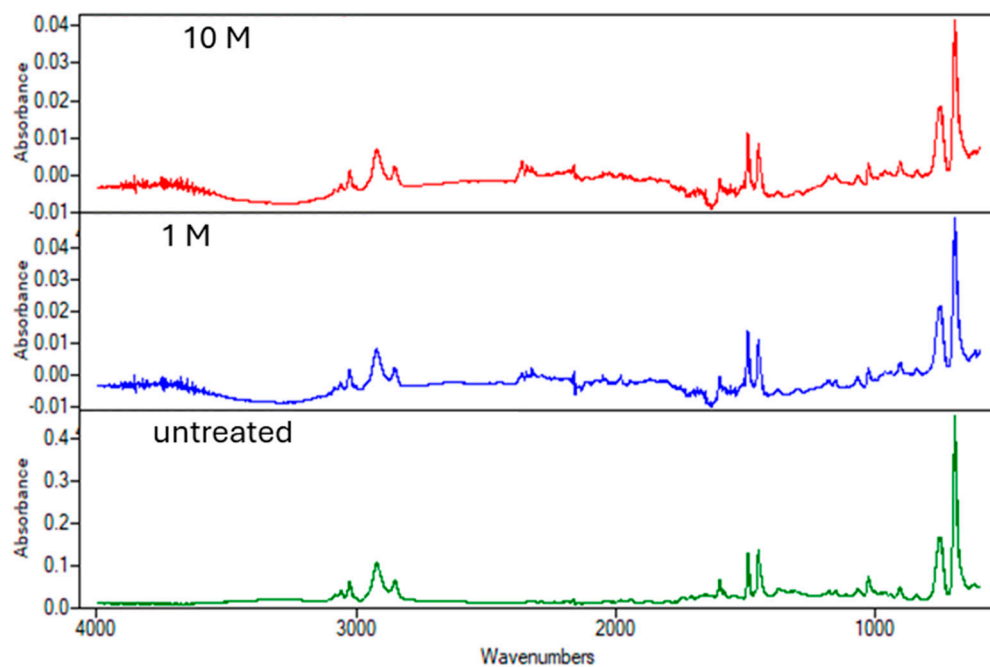


Fig S12: Spectra of PS before and after digestion using 1 M & 10 M HNO₃ at 60°C and 60 mins

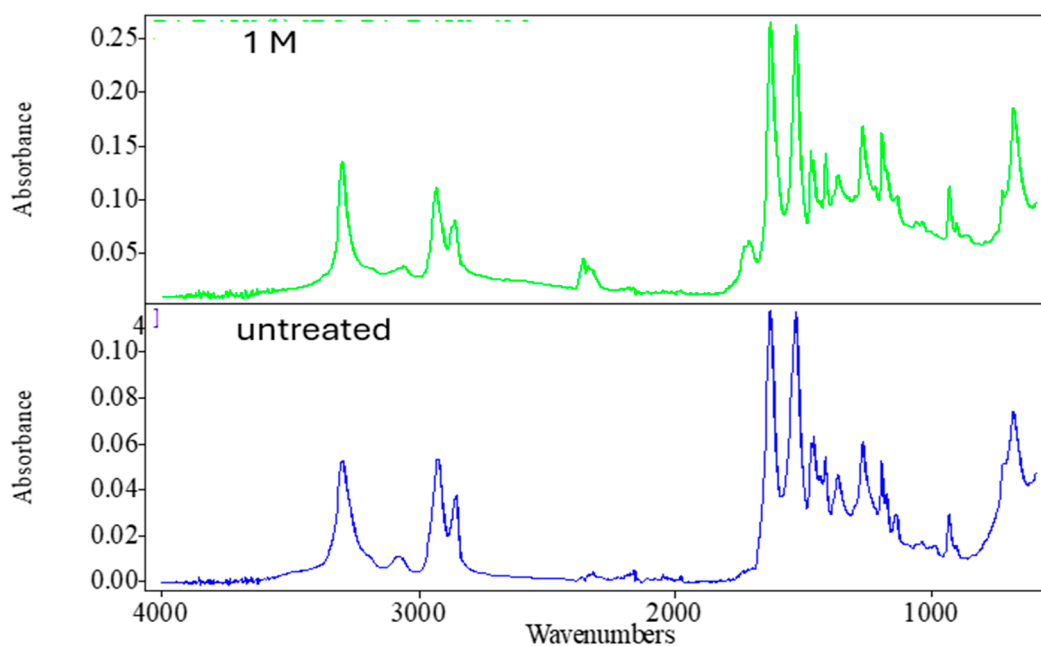


Fig S13: Spectra of PA before and after digestion using 1 M & 10 M HNO_3 at 60°C and 360 mins

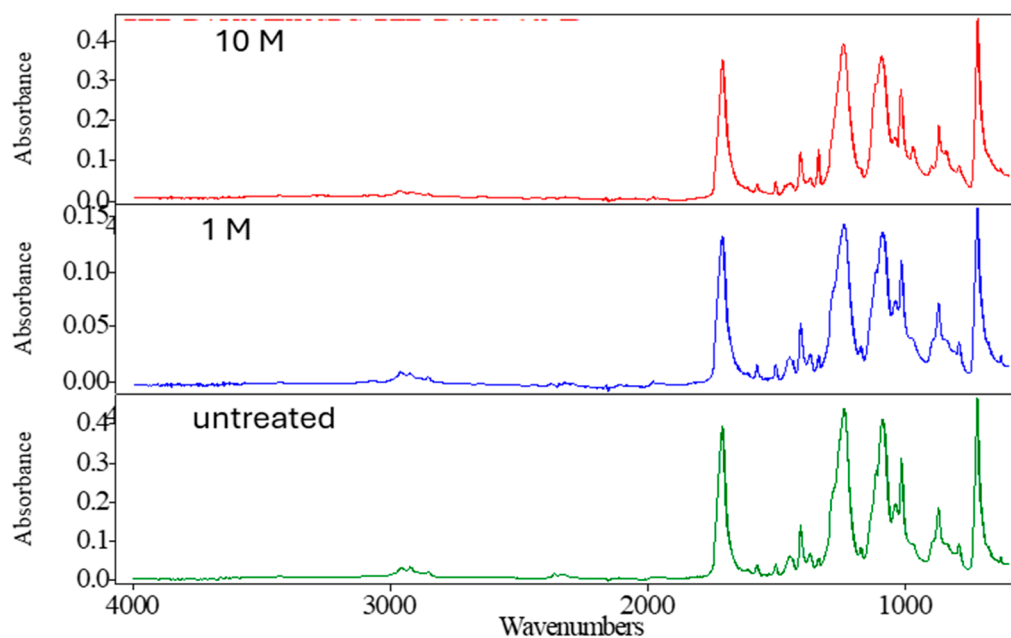


Fig S14: Spectra of PET before and after digestion using 1 M & 10 M HNO_3 at 60°C and 360 mins

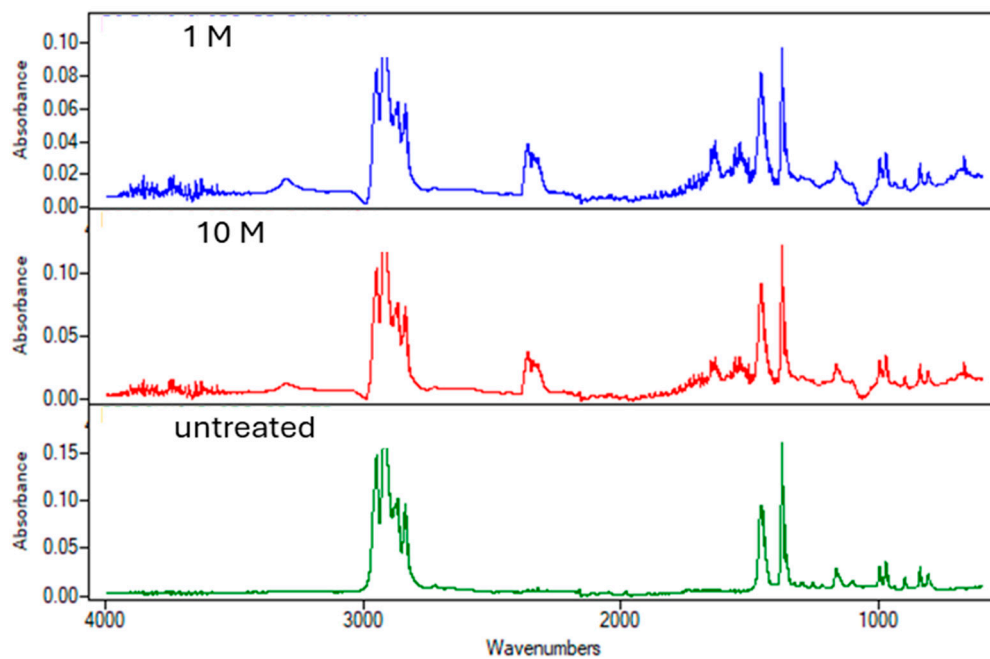


Fig S15: Spectra of PP before and after digestion using 1 M & 10 M HNO_3 at 60°C and 360 mins

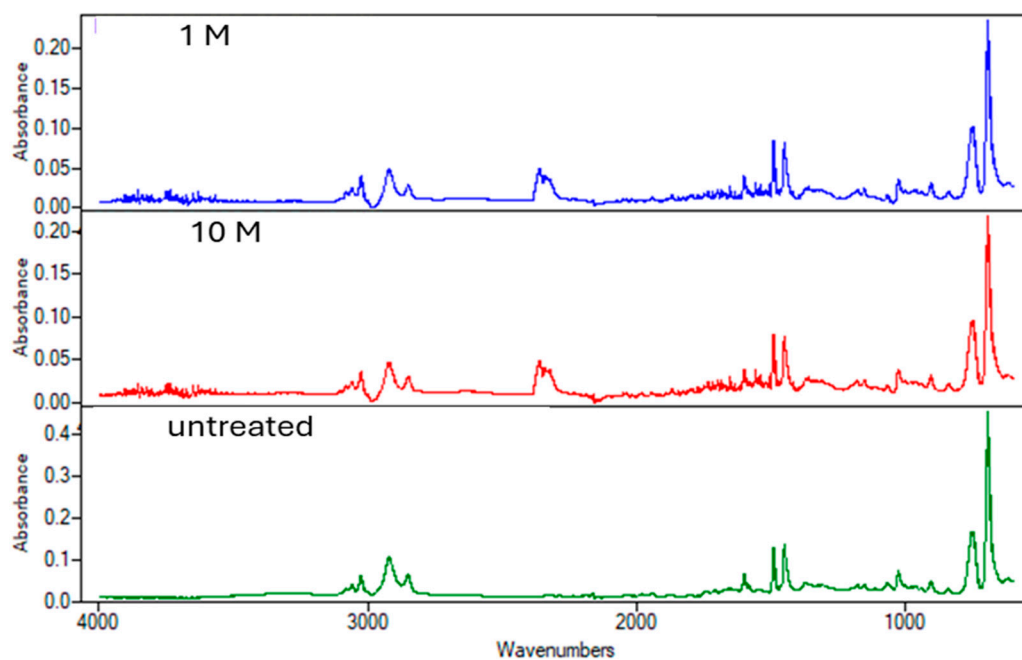


Fig S16: Spectra of PS before and after digestion using 1 M & 10 M HNO_3 at 60°C and 360 mins

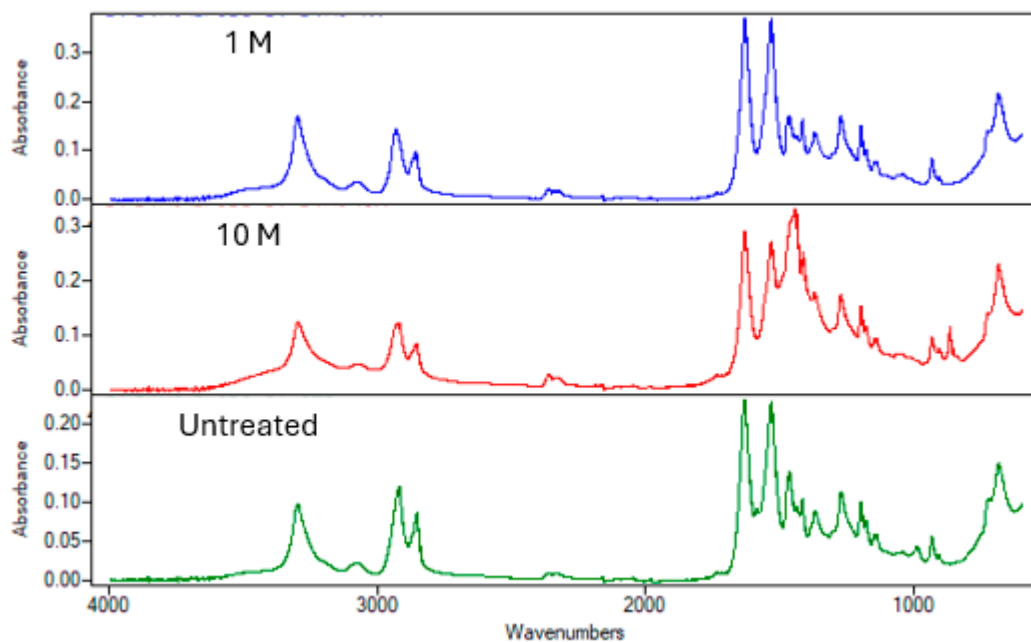


Fig S17: Spectra of PA before and after digestion using 1 M and 10 M NaOH at 30°C and 360 mins

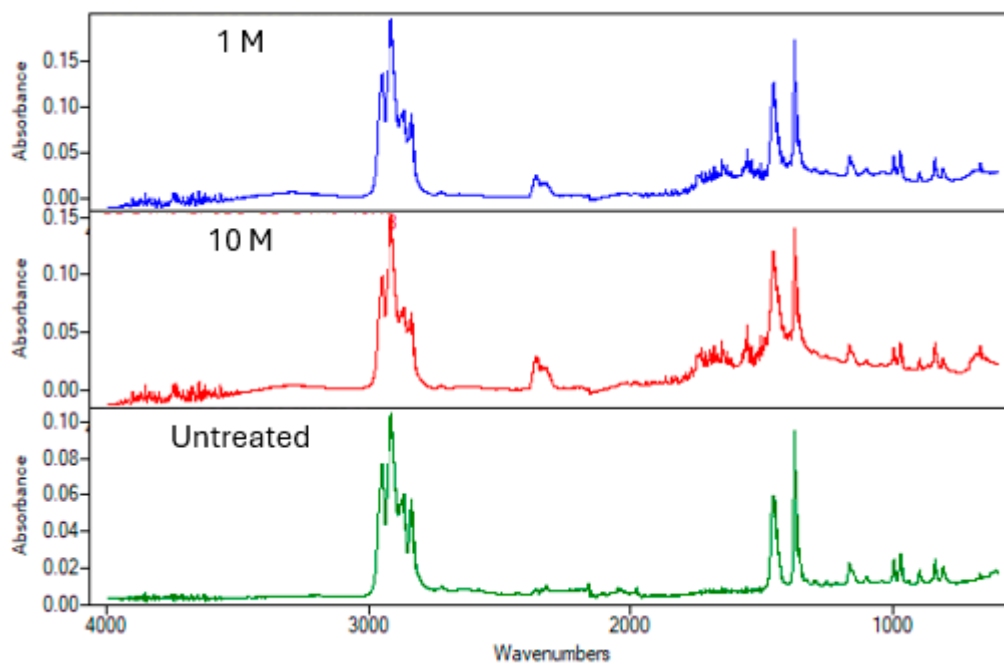


Fig S18: Spectra of PP before and after digestion using 1 M and 10 M NaOH at 30°C and 60 mins

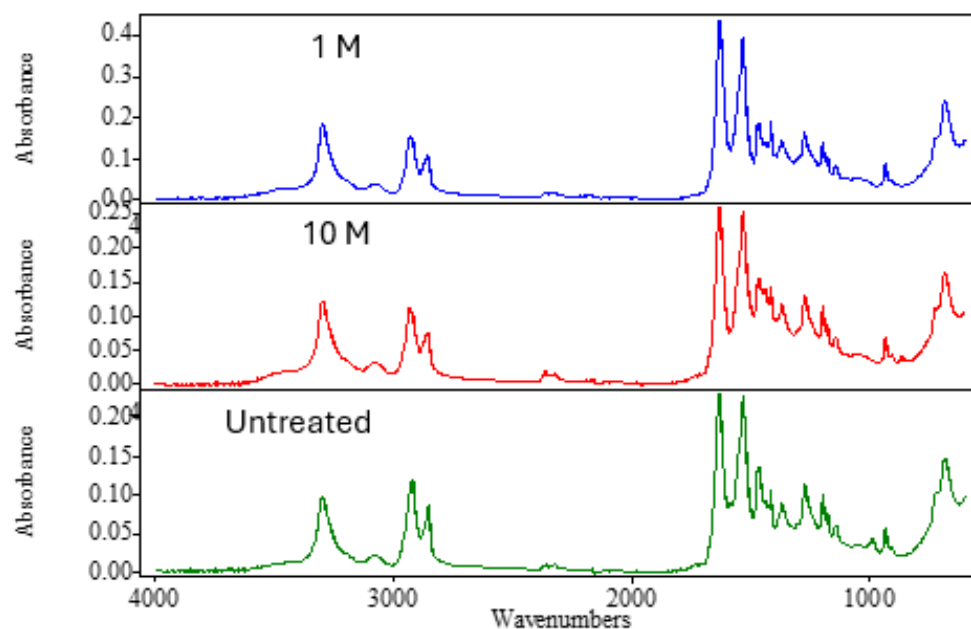


Fig S19: Spectra of PA before and after digestion using 1 M and 10 M NaOH at 30°C and 360 mins

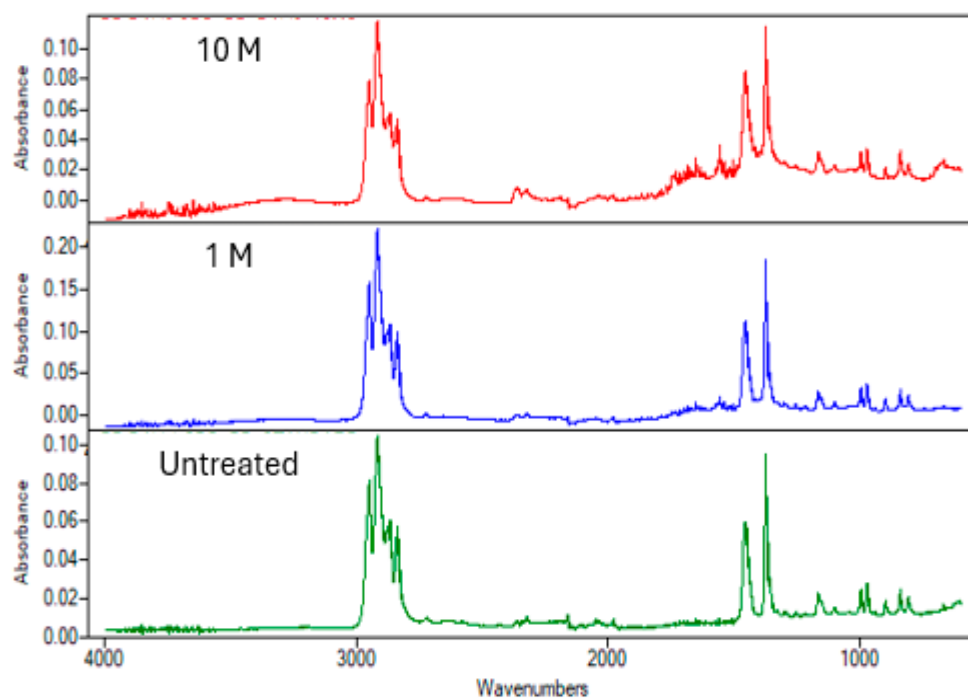


Fig S20: Spectra of PP before and after digestion using 1 M and 10 M NaOH at 30°C and 360 mins

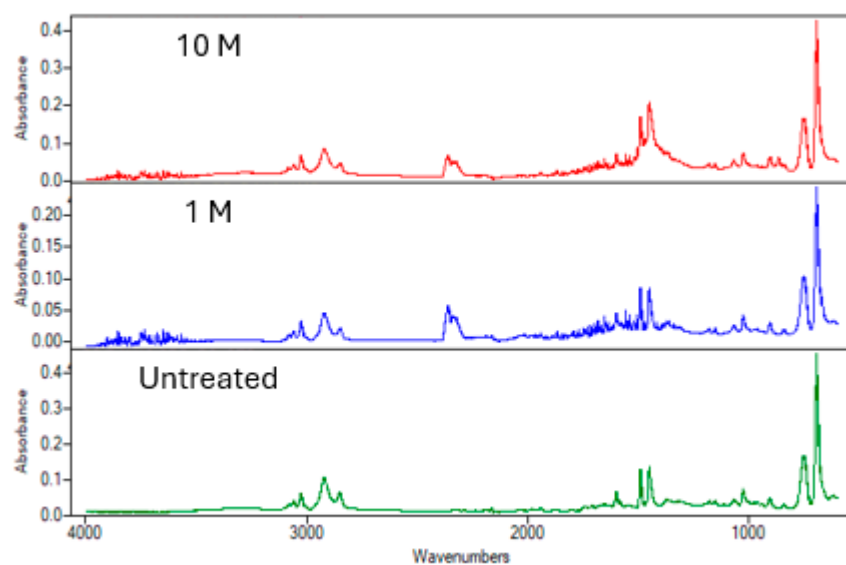


Fig S21: Spectra of PS before and after digestion using 1 M and 10 M NaOH at 30°C and 360 mins

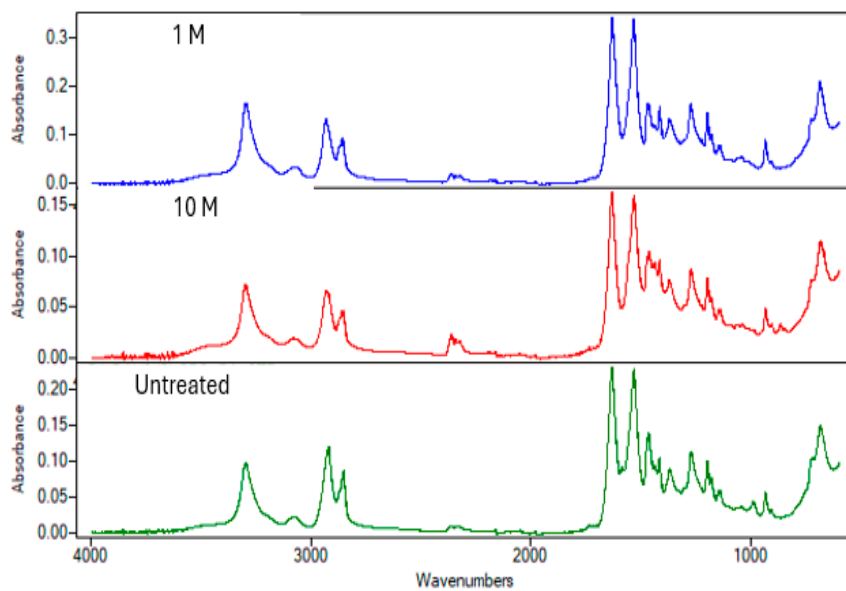


Fig S22: Spectra of PA before and after digestion using 1 M and 10 M NaOH at 60°C and 60 mins

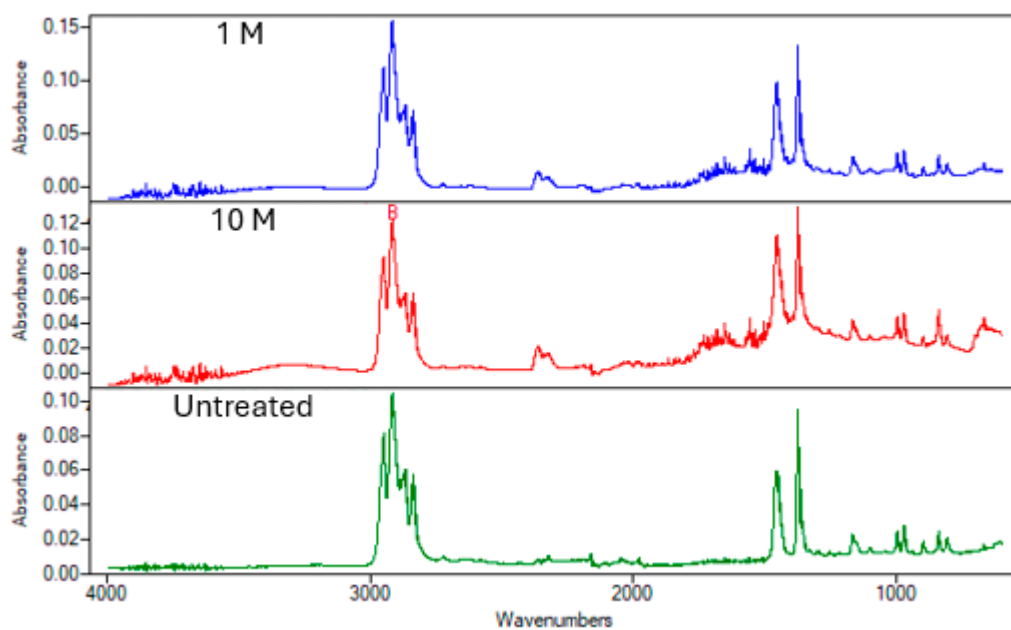


Fig S23: Spectra of PP before and after digestion using 1 M and 10 M NaOH at 60°C and 60 mins

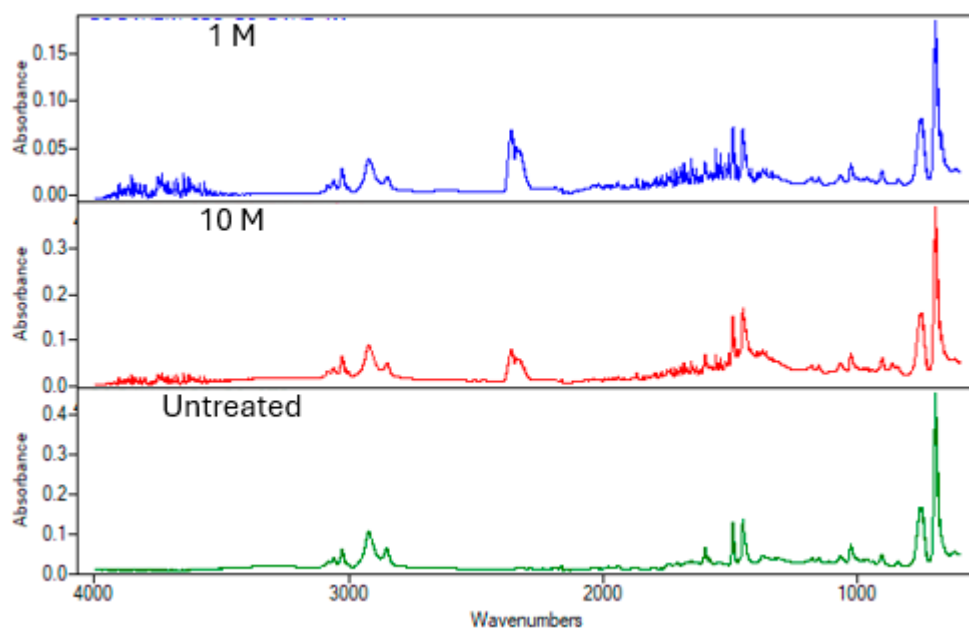


Fig S24: Spectra of PS before and after digestion using 1 M and 10 M NaOH at 60°C and 60 mins

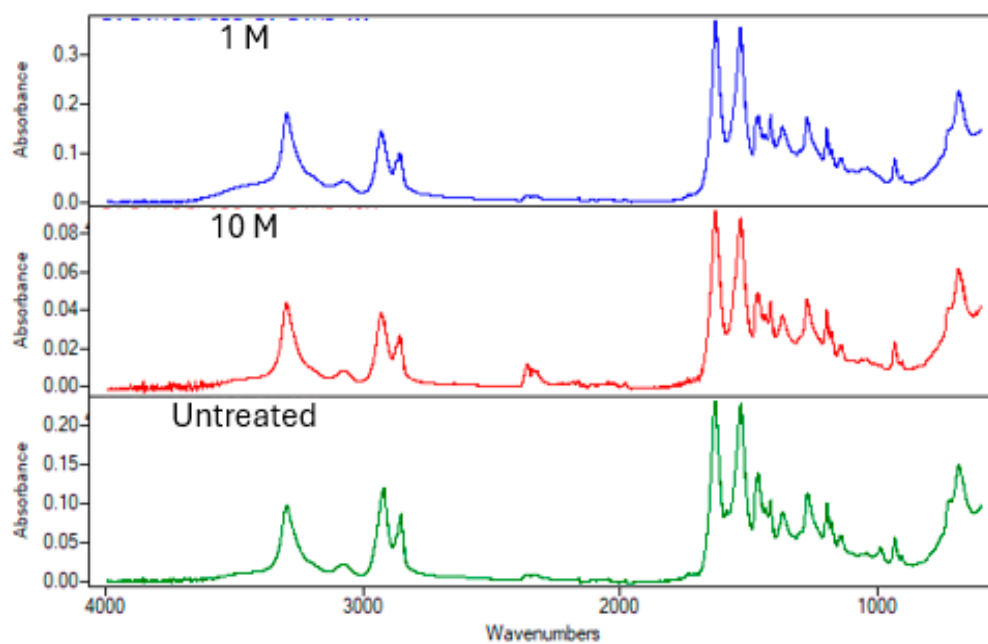


Fig S25: Spectra of PA before and after digestion using 1 M and 10 M NaOH at 60°C and 360 mins

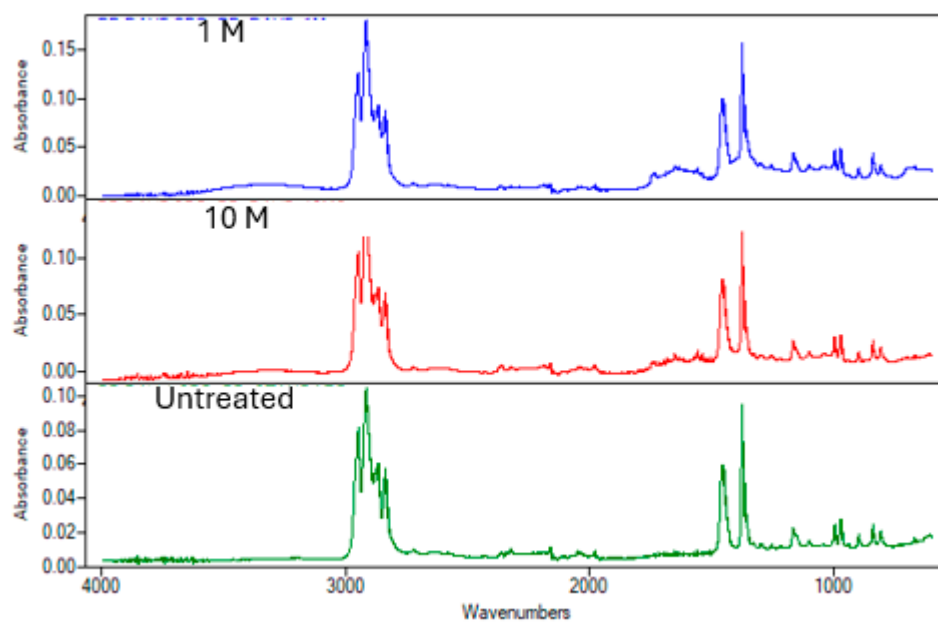


Fig S26: Spectra of PP before and after digestion using 1 M and 10 M NaOH at 60°C and 360 mins

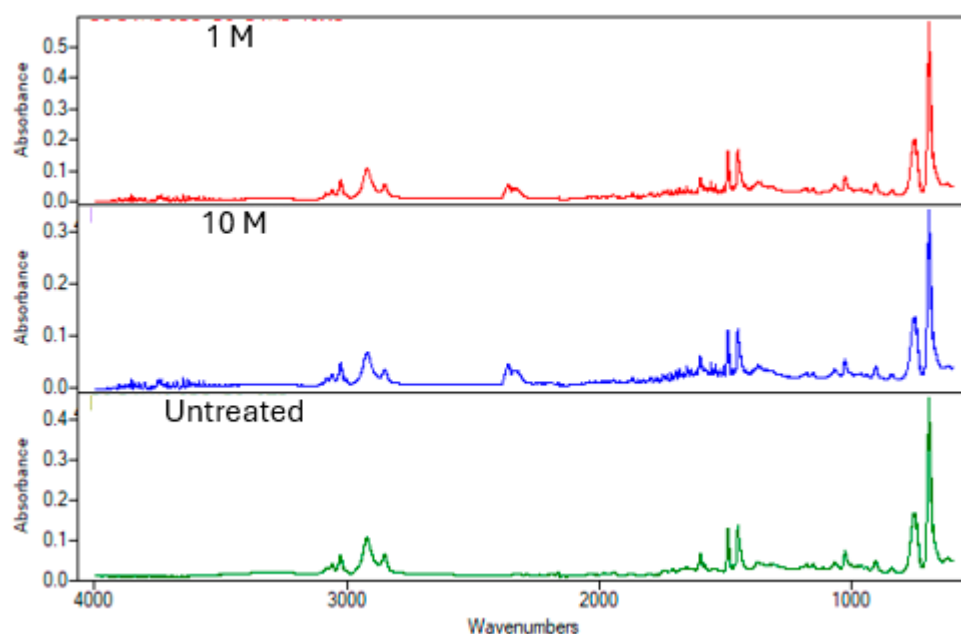


Fig S27: Spectra of PP before and after digestion using 1 M and 10 M NaOH at 60°C and 360 mins

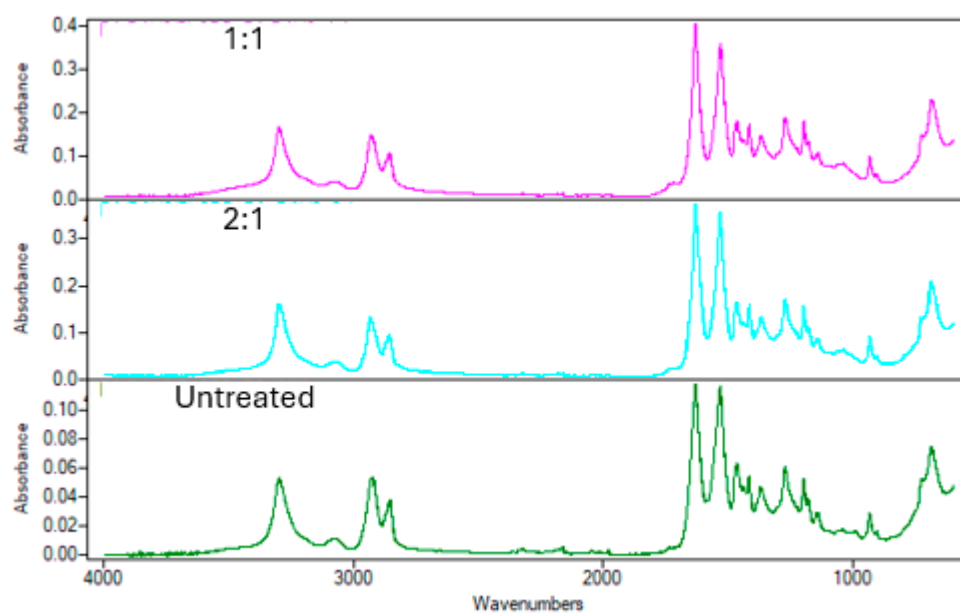


Fig S28: Spectra of PA before and after digestion using 1:1 and 2:1 Fenton's reagent at 30°C and 60 mins

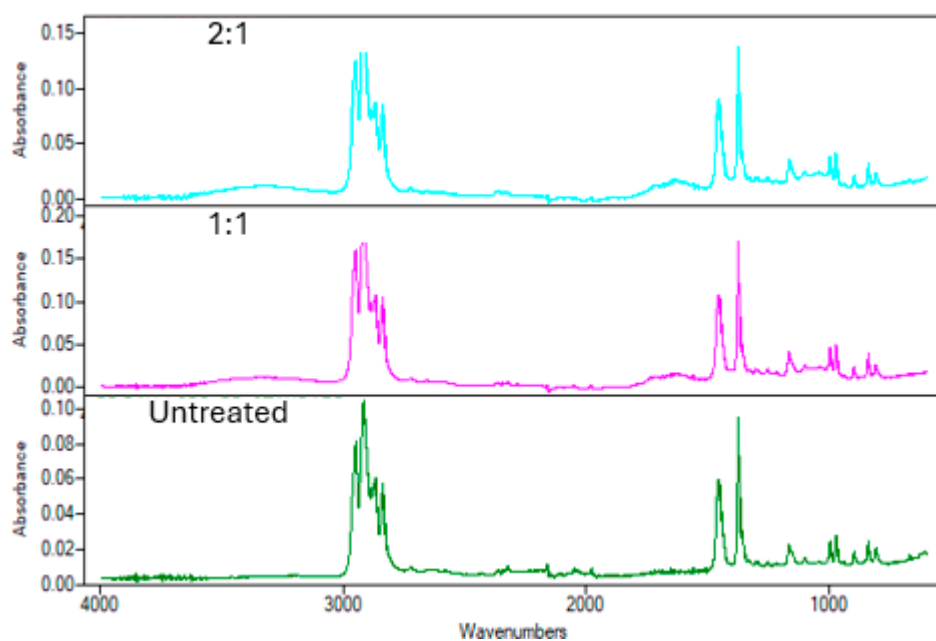


Fig S29: Spectra of PP before and after digestion using 1:1 and 2:1 Fenton's reagent at 30°C and 60 mins

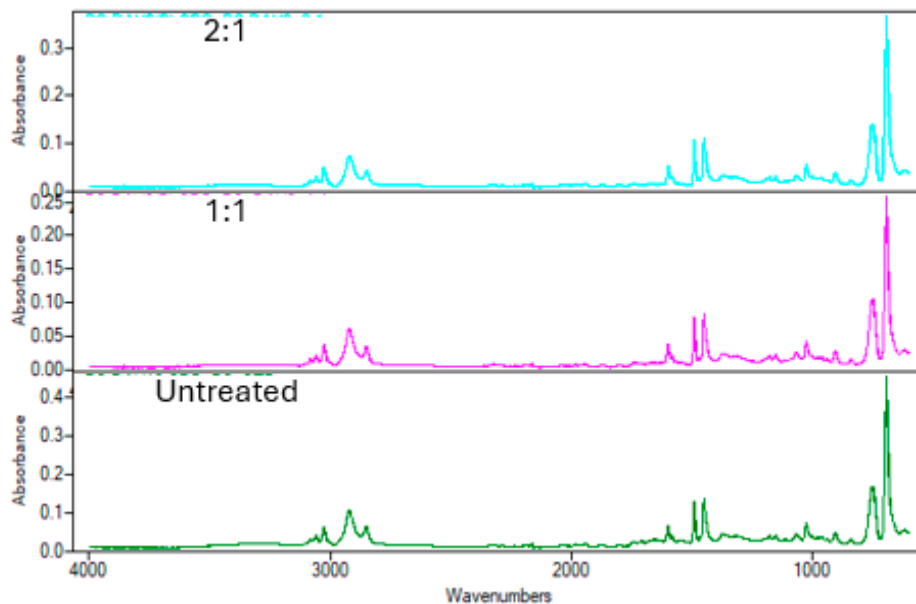


Fig S30: Spectra of PS before and after digestion using 1:1 and 2:1 Fenton's reagent at 30°C and 60 mins

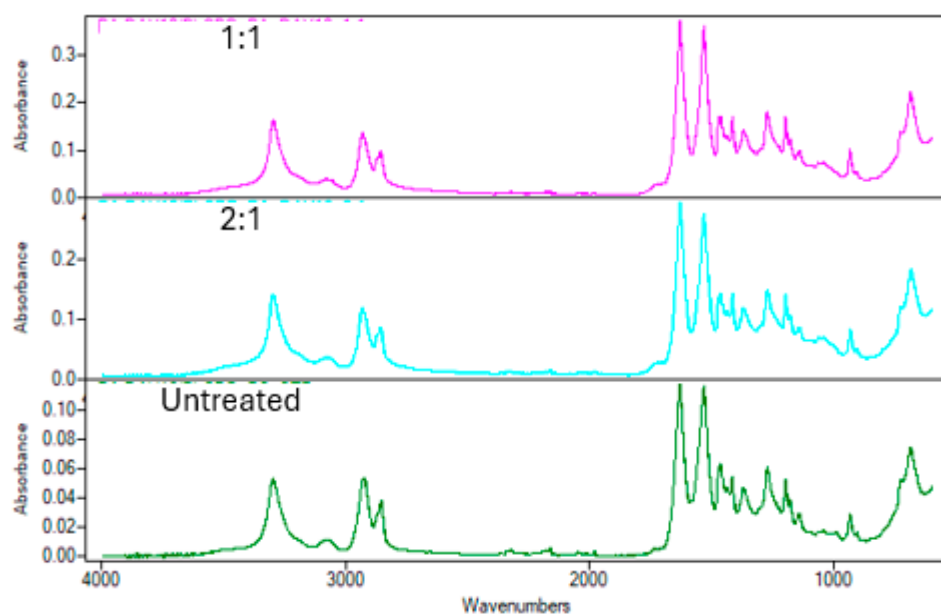


Fig S31: Spectra of PA before and after digestion using 1:1 and 2:1 Fenton's reagent at 30°C and 360 mins

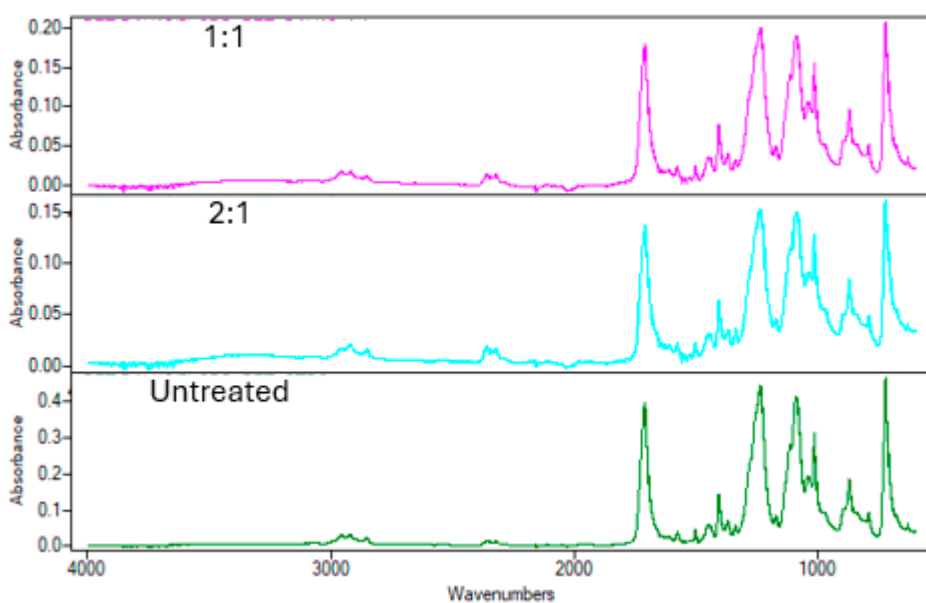


Fig S32: Spectra of PET before and after digestion using 1:1 and 2:1 Fenton's reagent at 30°C and 360 mins

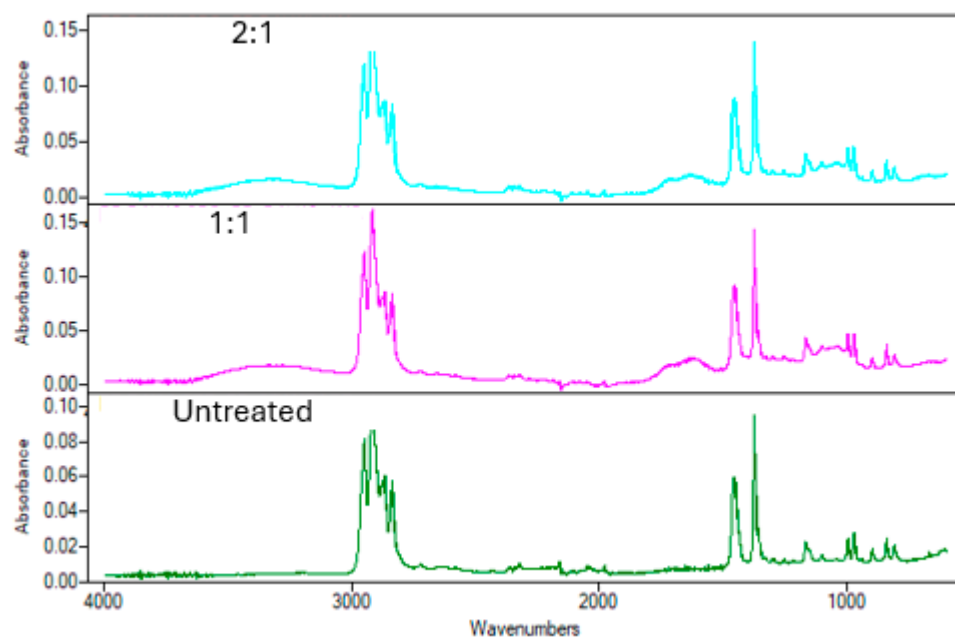


Fig S33: Spectra of PP before and after digestion using 1:1 and 2:1 Fenton's reagent at 30°C and 360 mins

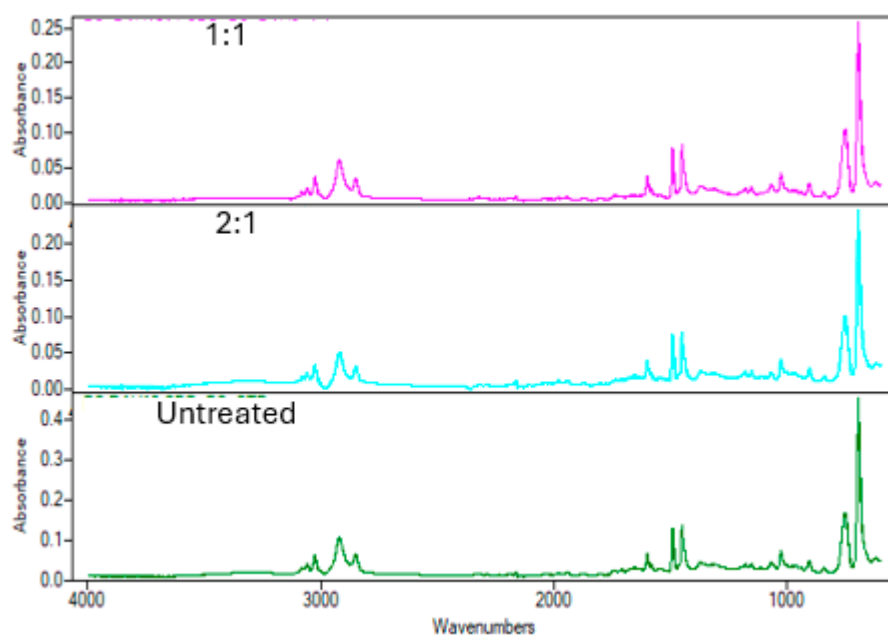


Fig S34: Spectra of PS before and after digestion using 1:1 and 2:1 Fenton's reagent at 30°C and 360 mins

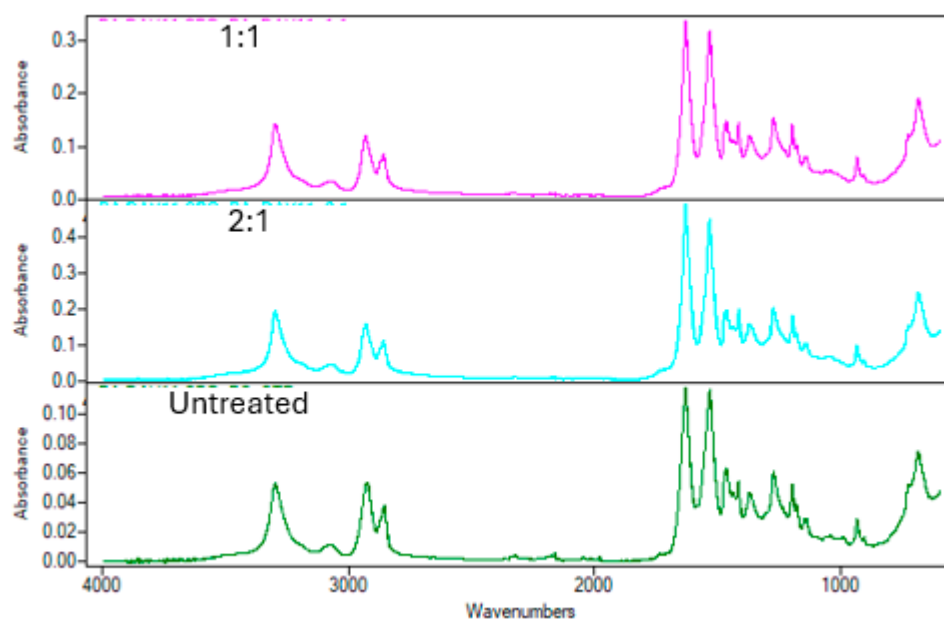


Fig S35: Spectra of PA before and after digestion using 1:1 and 2:1 Fenton's reagent at ambient temperature and 60 mins

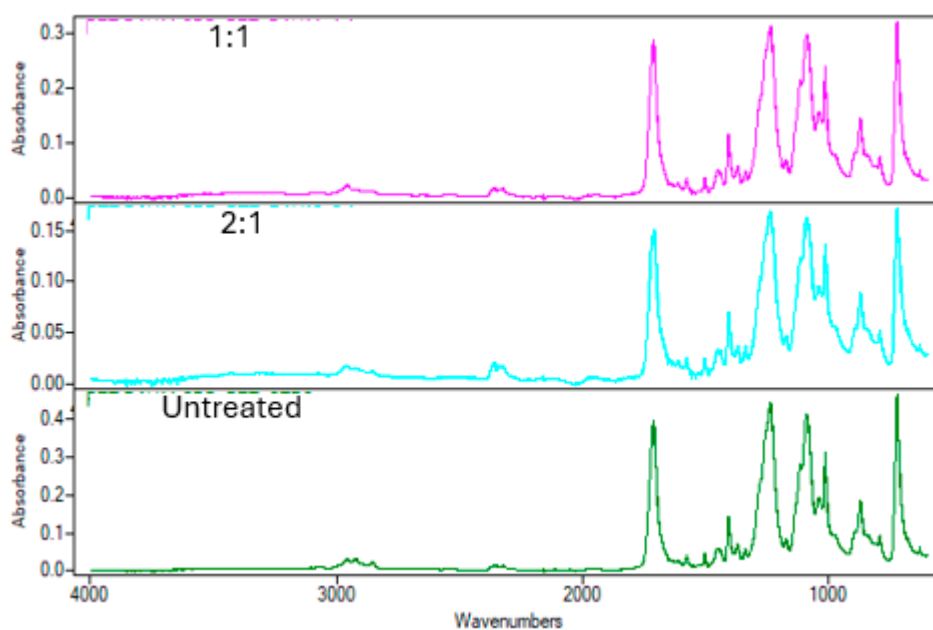


Fig S36: Spectra of PET before and after digestion using 1:1 and 2:1 Fenton's reagent at ambient temperature and 60 mins

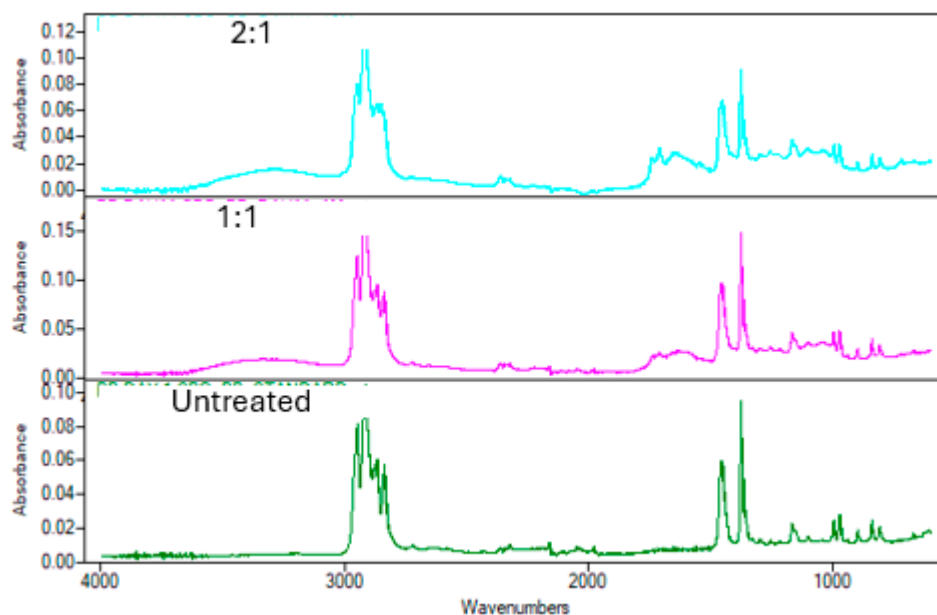


Fig S37: Spectra of PP before and after digestion using 1:1 and 2:1 Fenton's reagent at ambient temperature and 60 mins

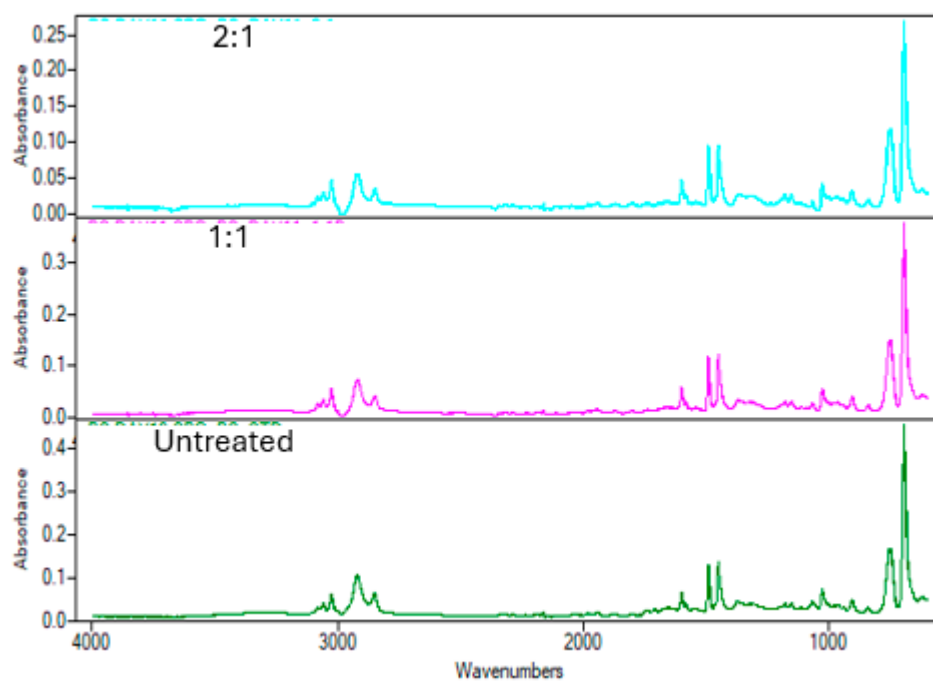


Fig S38: Spectra of PS before and after digestion using 1:1 and 2:1 Fenton's reagent at ambient temperature and 60 mins

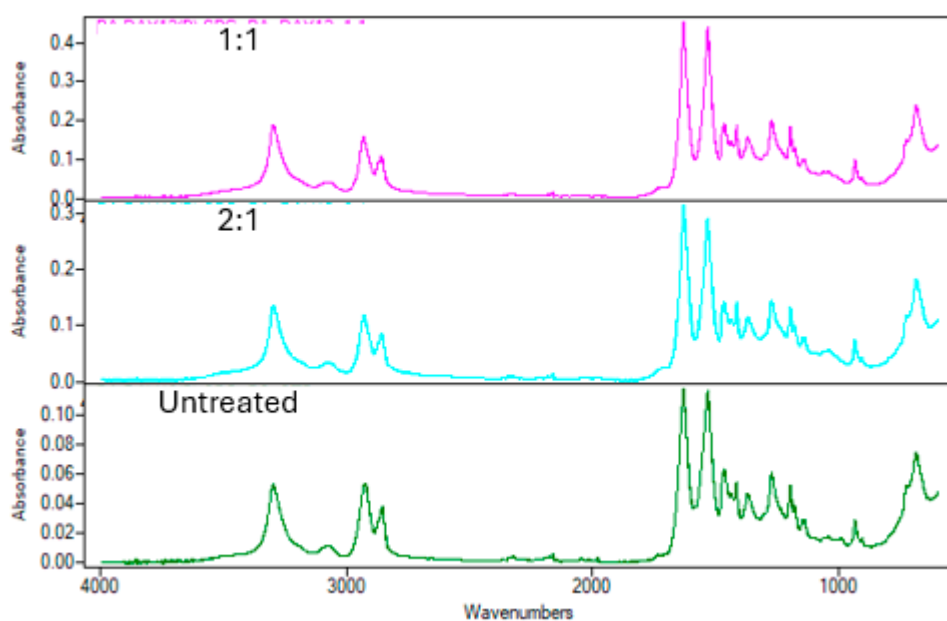


Fig S39: Spectra of PA before and after digestion using 1:1 and 2:1 Fenton's reagent at ambient temperature and 360 mins

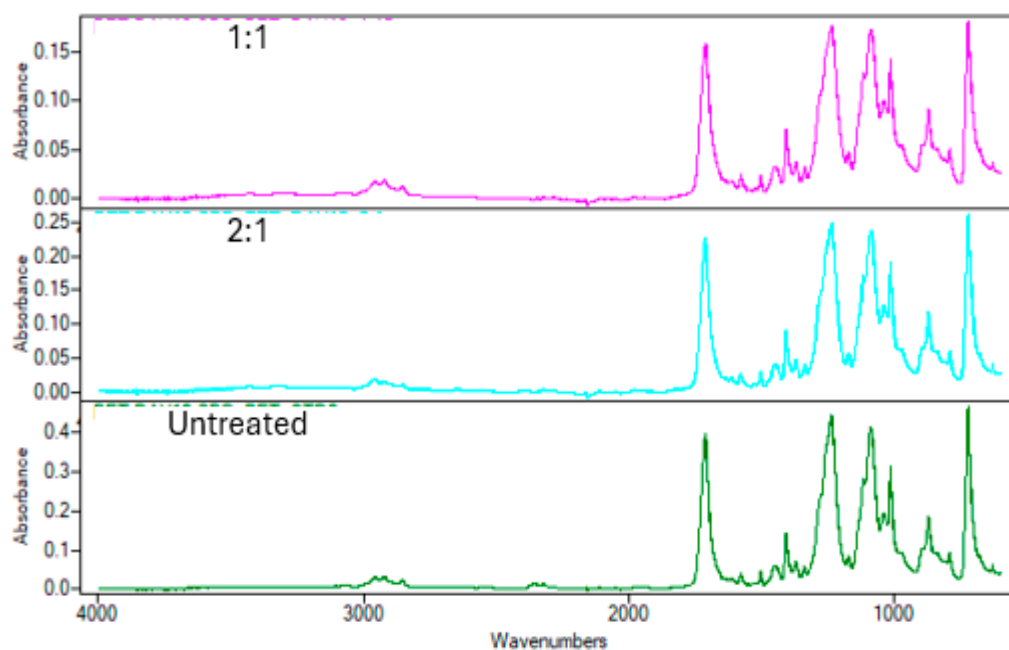


Fig S40: Spectra of PET before and after digestion using 1:1 and 2:1 Fenton's reagent at ambient temperature and 360 mins

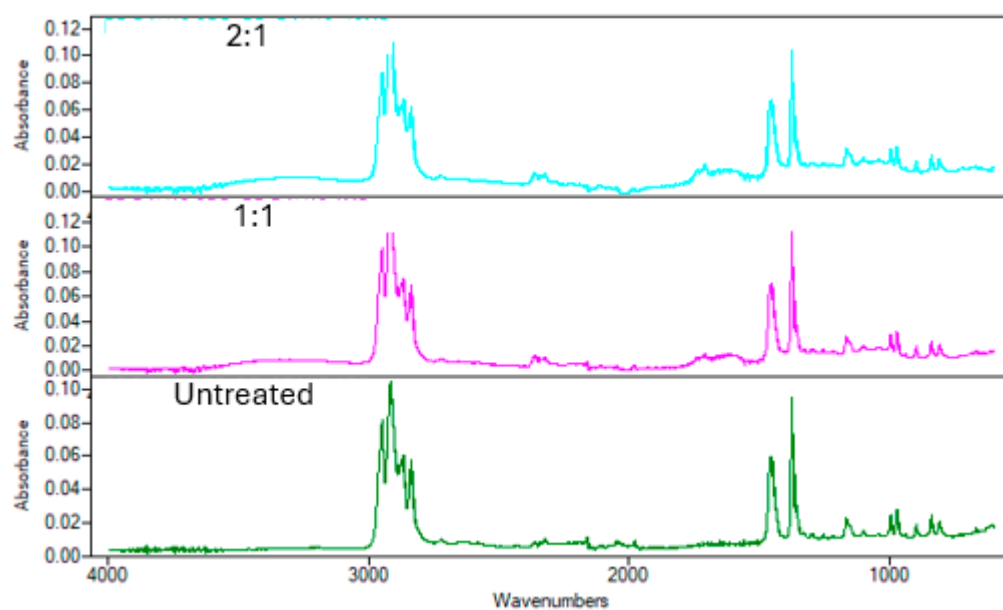


Fig S41: Spectra of PP before and after digestion using 1:1 and 2:1 Fenton's reagent at ambient temperature and 360 mins

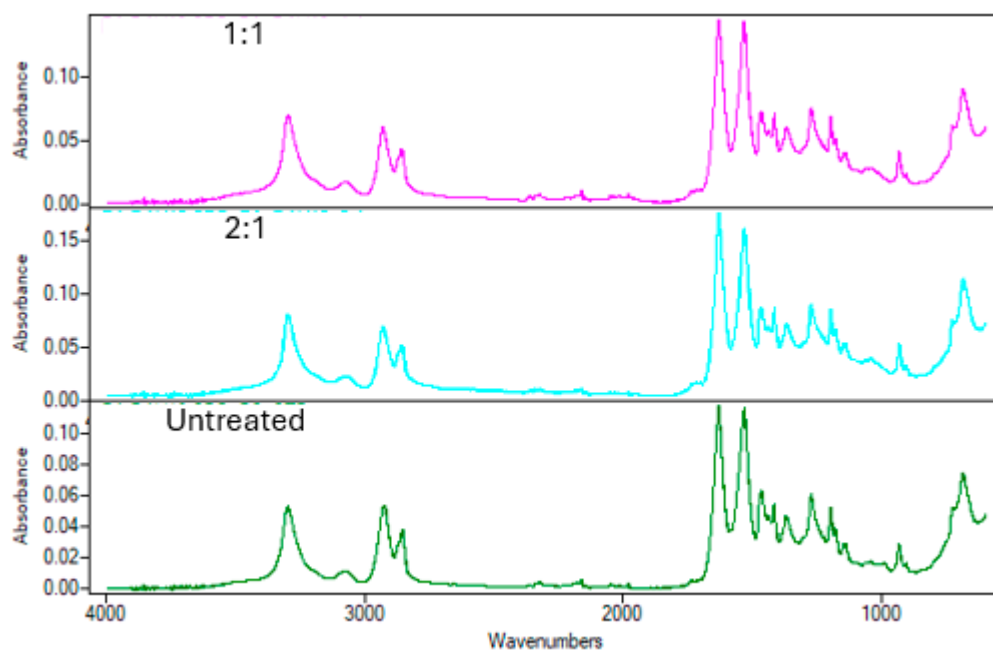


Fig S42: Spectra of PA before and after digestion using Fenton's reagent at ambient temperature and for 24 hours in digitubes

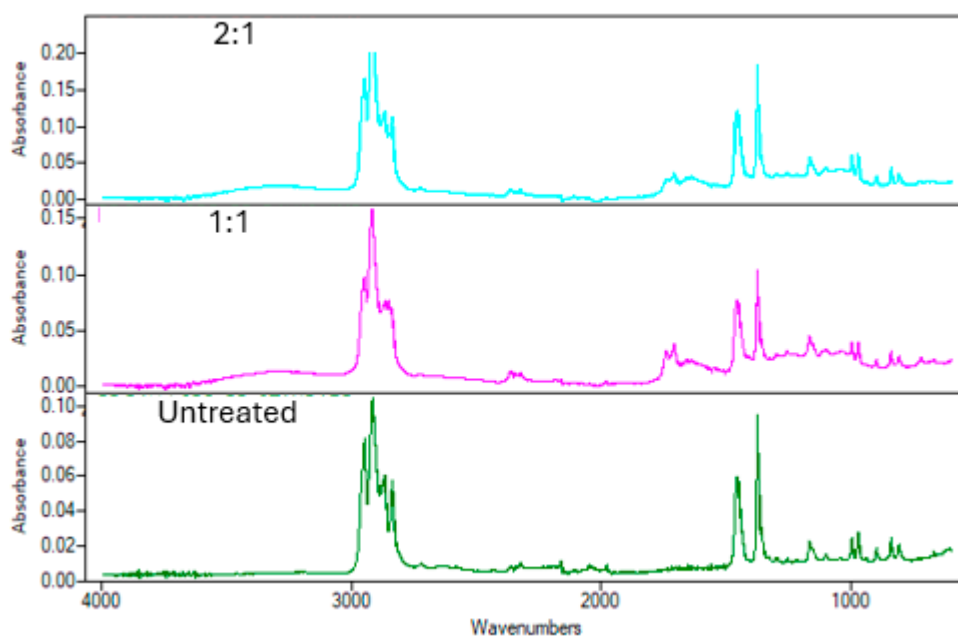


Fig S43: Spectra of PP before and after digestion using Fenton's reagent at ambient temperature and for 24 hours in digitubes

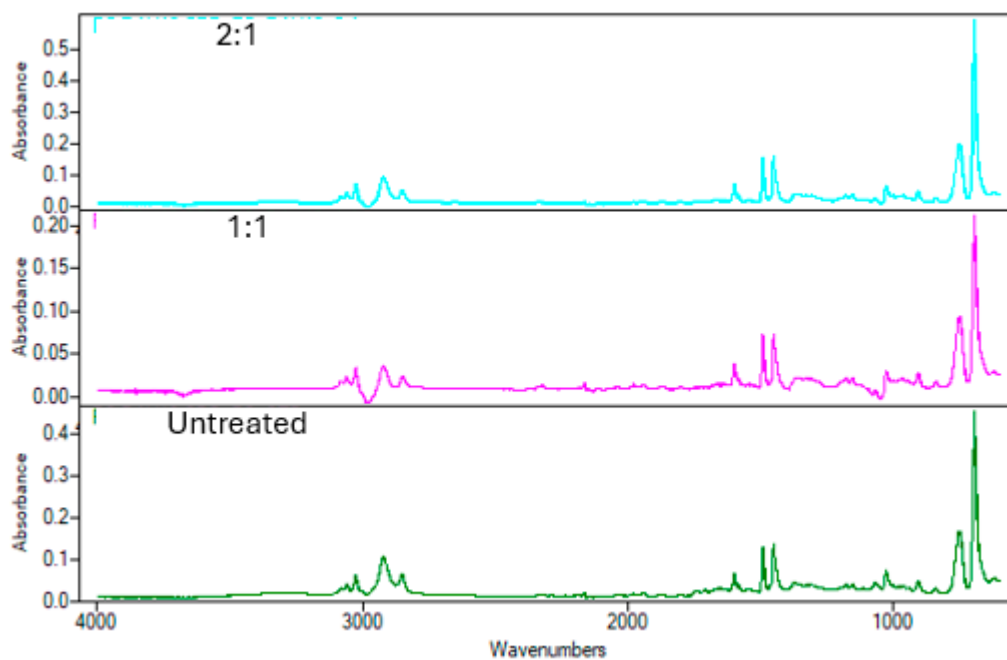


Fig S44: Spectra of PP before and after digestion using Fenton's reagent at ambient temperature and for 24 hours in digitubes