Bisphenol A (BPA) has been identified as a possible cause of developmental problems in animals due to its estrogenic activity when present in high concentrations. Because of the prevalence of BPA based epoxy resins and plastics, substitutes for BPA are being developed and tested. The object of this research was to develop methods for the small-scale production of BPA epoxy resins for further polymer characterization and strength testing. A two-step reaction was used to produce testable BPA based epoxy resins. In the first step, BPA was treated with epichlorohydrin to produce BPA diglycidyl ether. In the second step, the product was combined with 4,4'-diamonodicyclohexylmethane to form a linear polyamine/polyether that upon further heating forms a crosslinked polymer network. IR spectroscopy was used to monitor the progression of these processes. The reaction between BPA and epichlorohydrin produced BPA diglycidyl ether as evidenced by the disappearance of BPA's OH group in the IR spectrum between 3000-3500 cm^{-1}. The epoxy resin curing reaction produced a hard, clear material with the IR spectrum showing little change in the peaks when curing times were varied from 1-3 hours and from 90-160^{o}C. At 160^{o}C a slight yellowing was observed in the resin. This data suggest that research quantities of BPA epoxy resins can be prepared at lower curing temperatures and shorter curing times than required when in industrial production. This fast sample production will facilitate the testing and eventual use of replacements for BPA in plastics and resins.