FIG. 16. Emission spectra of acridine orange in boric acid—4.6×10^{-5} g/g.

FIG. 18. Total initial emission intensity (normalized to 9 kbar) vs pressure—acridine orange in boric acid.

no shift in either case. The dimer peak of acridine orange shows the larger decrease in area with pressure.

The emission spectra vs pressure for two concentrations of acridine orange are presented in Figs. 16 and 17. The acridine yellow spectra were similar. When making these measurements, no filter was used on the exciting light, so both monomer and dimer peaks were being excited. The shifts of the emission peaks with pressure were small and could not be accurately determined. There appears to be a concentration dependent peak on the red side of the strong peak in acridine orange. These peaks all decrease in intensity with pressure and
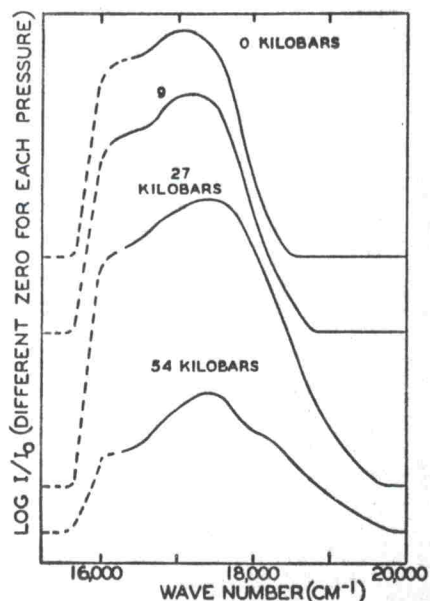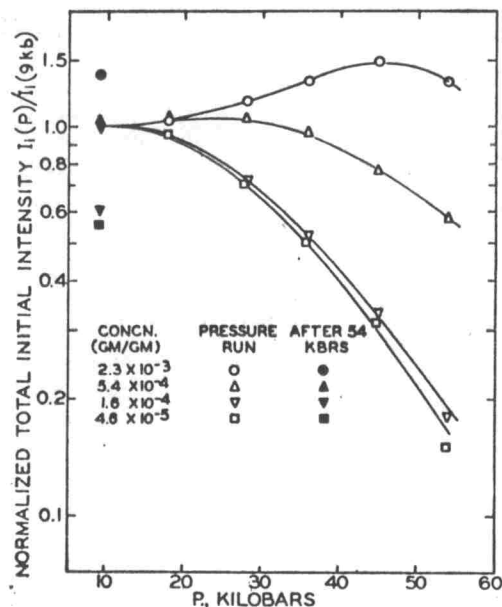
are located at the red edge of their respective dimer absorption peaks. This would tend to associate the emission with the dimer. The changes in the emission intensity with pressure for several concentrations of acridine orange are shown in Fig. 18. These were measured with a photomultiplier tube. Similar results were obtained for acridine yellow. The pressure effect on the intensity is strongly concentration dependent. This will be discussed in more detail below.

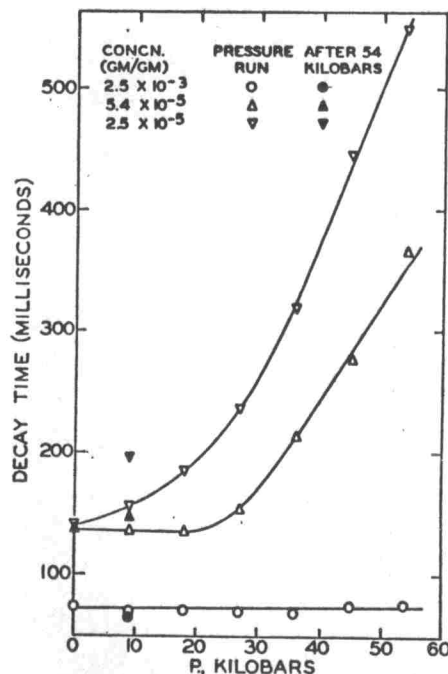FIG. 17. Emission spectra of acridine orange in boric acid—5.4×10^{-4} g/g.

FIG. 19. Slow component decay time vs pressure for three concentrations—acridine yellow in boric acid.