

## Analysis of fish eye in polymer film

This data was obtained using a micro FTIR to analyze a fish eye in a copolymer layer composed of vinyl chloride and vinyl acetate. Fish eyes sometimes occur during the manufacture of film. In this case, several fish eyes measuring from 5  $\mu\text{m}$  to more than 100  $\mu\text{m}$  were present. The spectrum of a fish eye over 100  $\mu\text{m}$  in size is shown in Figure 1 and the spectrum of another measuring less than 30  $\mu\text{m}$  is shown in Figure 2.

These data show that these fish eyes are different in composition.

### Measurement conditions

Accumulation: 32 times  
 Resolution: 4  $\text{cm}^{-1}$   
 Detector: MCT  
 Aperture: 20  $\mu\text{m}$  x 20  $\mu\text{m}$

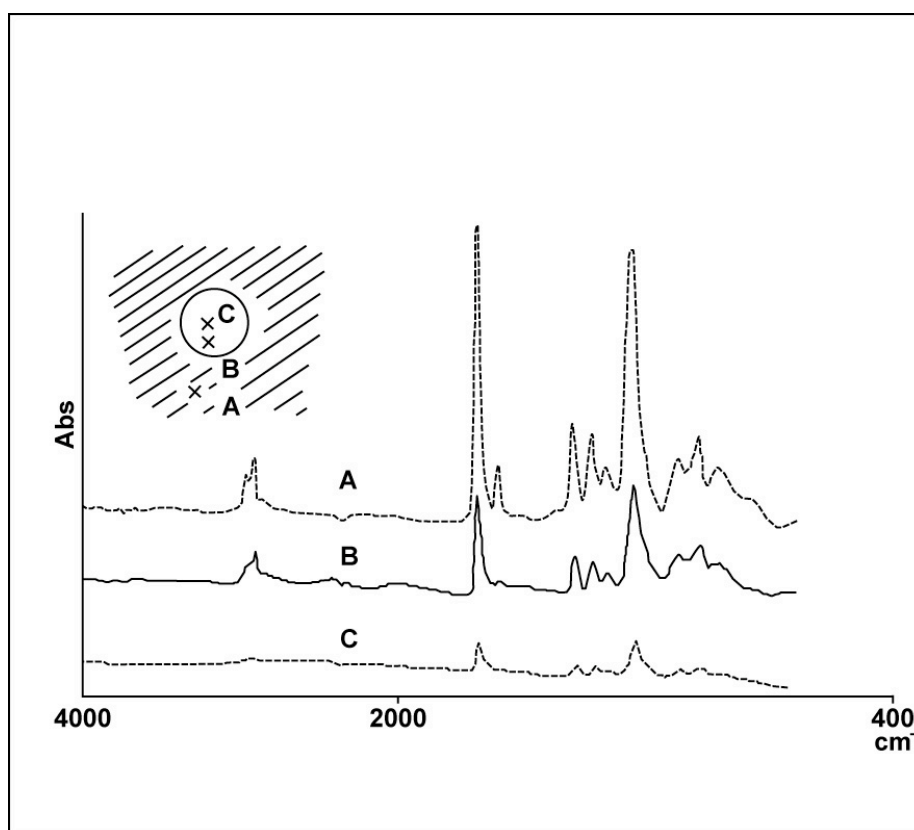


Fig. 1

Three measurements were taken to determine the composition of the fish eye larger than 100  $\mu\text{m}$ . As the area of measurement approaches the center of the fish eyes, peak intensity decreases, as shown in progression from spectrum A, to B to C. These data indicate that a bubble is located at the center of the fish eye