

## **The effects of extraction mediums on the properties of porous epoxy using natural rubber latex as void template**

### **Abstract**

Porous epoxy was fabricated by using natural rubber latex particles as the void template which were extracted after by different types of extraction mediums such of distilled water and toluene under ultrasonic. As expected, the increase in latex content from 0.5, 1.0, 1.5 to 2.0 phr in porous epoxy produced the higher porosities as well as lower dielectric constant property. Furthermore, toluene medium extracted more NR latex particles and produced more porous in epoxy matrix compared to distilled water medium. Therefore, porous epoxy from toluene extraction exhibited better dielectric constant property, which is preferred for electronic packaging application. Besides that, the mechanical properties also showed a reasonable reduction in flexural strength and modulus of the epoxy porous obtained from toluene extraction compared to distilled water extraction.

### **Keywords**

Extraction method; Porous epoxy; Toluene; Ultrasonic; Water