

### **Abstract**

The effect of high oxygen level on development of senescent spotting and quality of 'Sucrier' banana was studied at room temperature (25°C, RH 90%). Banana fruits of ripened at color index (CI) 3 were kept in plastic containers with a flow of 18 ( $\pm 2-3$ )% and 90 ( $\pm 2-3$ )% oxygen until the end of study. The results showed that high oxygen (90% oxygen) increased considerably development of senescent spotting compared with the control banana (18% oxygen). High oxygen level had no significant effect on firmness and quality of banana treated with high oxygen level was acceptable. Total phenolics and activities of phenylalanine ammonia lyase and polyphenol oxidase in the banana peel with high oxygen level decreased compared with the control banana. Dopamine content in the peel of banana fruits treated with high oxygen level declined more rapidly than the control banana.