

Lampiran 9. Contoh Perhitungan

Laju Respirasi CO₂ (mg/kg.jam)

Diketahui : Persamaan kurva standar : $Y = -1,041x + 0,722$

Headspace kemasan = 2060 ml

Berat buah = 1236,9760 g = 1,2369760 kg

Bj CO₂ = 1.975 mg/ml

Dimana :

Y = Produksi CO₂ (ml)

X = Absorbansi dari spektrofotometer

Perhitungan konsentrasi CO₂ setelah penyimpanan selama 2 hari/48 jam pada stoples A pada suhu ruang (29°-32°C), hasil absorbansi sample gas (1.5 ml) = 0,189, maka :

$$\begin{aligned} Y &= -1,041 x + 0,722 \\ &= (-1,041 * 0,189) + 0,722 \\ &= 0,5253 \text{ ml} \end{aligned}$$

(% Volume)

$$\begin{aligned} &= (0,5253 \text{ ml} / 1.5 \text{ ml}) \times 100\% \\ &= 35,02 \% \end{aligned}$$

Respirasi Salak Pondoh (mg/kg/jam)

$$\begin{aligned} &= ((\% \text{ akhir} - \% \text{ awal}) \times \text{bj CO}_2 \times \text{freespace}) / \text{massa bahan} / \text{waktu simpan} \\ &= ((35,02 \% - 5\%) \times 1.975 \text{ mg/l} \times 2060) / 1,2369760 \text{ kg} / 48 \text{ jam} \\ &= 20,56816 \text{ mg/kg/jam} \end{aligned}$$

