

$$\text{Upwelled PO}_4 = 2.2 \mu\text{mol kg}^{-1}$$

$$\text{Upwelled O}_2 = 210 \mu\text{mol kg}^{-1}$$

$$\text{Saturation O}_2 = 360 \mu\text{mol kg}^{-1}$$

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Assume

(1) No  $\text{PO}_4$  utilization

(2) 65 %  $\text{O}_2$  resaturation

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Then

$$\text{PO}_4^* = 2.2 + \frac{0.65(360-210)+210}{175} - 1.95 = 1.95 \mu\text{mol kg}^{-1}$$

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