$$\boldsymbol{C_{3,i+1} = C_{3,i} + \frac{C_{2,i} - C_{3,i}}{\tau\,\alpha_3 \prod_{i=1}^{2}(1-\alpha_i)}\,\Delta t}$$

$$\nu\, C_2 = \nu\, C_3 + \frac{\mathrm{d}C_2}{\mathrm{d}t}\, V\, \alpha_3 \prod_{i=1}^{2}(1-\alpha_i) \implies$$

$$\implies C_2 = C_3 + \frac{\mathrm{d}C_3}{\mathrm{d}t}\, \tau\, \alpha_3 \prod_{i=1}^{2}(1-\alpha_i) \implies$$

$$\implies \frac{\mathrm{d}C_3}{\mathrm{d}t} = \frac{C_2 - C_3}{\tau\,\alpha_3 \prod_{i=1}^{2}(1-\alpha_i)} \implies$$

$$\implies \frac{\Delta C_3}{\Delta t} = \frac{C_{3,i+1} - C_{3,i}}{\Delta t} = \frac{C_{2,i} - C_{3,i}}{\tau\,\alpha_3 \prod_{i=1}^{2}(1-\alpha_i)} \implies$$

$$\implies C_{3,i+1} = C_{3,i} + \frac{C_{2,i} - C_{3,i}}{\tau\,\alpha_3 \prod_{i=1}^{2}(1-\alpha_i)}\,\Delta t$$