$$\mathbf{d}_{YLD,t} = \begin{pmatrix} \text{CVD} \\ \text{dw} \frac{1}{r\Delta_t} (1 - e^{-r\Delta_t}) \Delta_t \\ \text{DOC} \\ \text{trDCVD} \end{pmatrix} \qquad \mathbf{d}_{YLL,t} = \begin{pmatrix} \text{H} \\ \text{O} \\ \text{DOC} \\ \text{DOC} \\ \text{trDCVD} \end{pmatrix} \begin{pmatrix} 0 \\ 0 \\ 0 \\ \frac{1}{r} \left(1 - e^{-rEx(a_t)} \right) \end{pmatrix}$$