doi:10.1351/goldbook.R05145

rate of change ratio

The quotient of two rates where the quantities are of the same kind in the same system for different components:

$$\frac{\mathrm{d}Q_1 / \mathrm{d}t}{\mathrm{d}Q_2 / \mathrm{d}t}$$

For finite time intervals, mean rate of change ratio is:

$$\frac{\Delta Q_1 / \Delta t}{\Delta Q_2 / \Delta t} = \frac{\Delta Q_1}{\Delta Q_2}\,\Delta t$$

Rate of change ratio has the dimension one. The denominator is often called the reference quantity. Examples are: mass rate ratio, $\frac{\mathrm{d}m_1 / \mathrm{d}t}{\mathrm{d}m_2 / \mathrm{d}t}$; amount of substance rate ratio, $\frac{\mathrm{d}n_1 / \mathrm{d}t}{\mathrm{d}n_2 / \mathrm{d}t}$.

Source:
PAC, 1992, *64*, 1569 *(Quantities and units for metabolic processes as a function of time (IUPAC Recommendations 1992))* on page 1572

