total velocity of the analyte (in capillary electrophoresis), v_{tot}
The sum of *electrophoretic velocity*, v_{ep}, of an ion and the electro-osmotic velocity, v_{eo}.

$$v_{tot} = v_{ep} + v_{eo}$$

This quantity can be measured experimentally as the effective length of the capillary divided by the *migration time* (L_{eff}/t_m).

Notes:

1. Depending on the signs and relative magnitudes of these velocities, the total velocity of an analyte can have either the same or the opposite direction to the electro-osmotic velocity.
2. The total velocity is the velocity of the ion measured as a displacement relative to the capillary wall divided by time.

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