**total velocity of the analyte, \( \nu_{\text{tot}} \)**

*in capillary electrophoresis*

The sum of electrophoretic velocity, \( \nu_{\text{ep}} \), of an ion and the electroosmotic velocity, \( \nu_{\text{eo}} \).

\[
\nu_{\text{tot}} = \nu_{\text{ep}} + \nu_{\text{eo}}
\]

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

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.

*Source:*