

Voltage Drop Inside a Cell

As long as the cell is not connected to an external load circuit, the voltage measured across its terminals is the emf. When the cell is connected to an external loading circuit like a resistance, a current flows and the voltage measured now across the cell or the load is the potential difference.

There will be a difference between the emf measured first and the p.d measured later. The p.d will be lower than the emf. This is due to the internal drop in the cell due to the current flowing through the internal resistance of the cell.