

membrane

in an ion-selective electrode

A general term which refers to a continuous layer, usually consisting of a semi-permeable material, with controlled permeability covering a structure, such as carbon or an inert metal, or separating two electrolyte solutions. This latter case is the most general form of an ion-selective electrode. The membrane separates the internal components of the ion-selective electrode from the test solution. The membrane of an ion-selective electrode is responsible for the EMF response and selectivity of the entire electrode. Comment: Membranes of sensor electrodes are thought to be practically homogeneous, but an actual membrane may contain inhomogeneous regions, often at surfaces, and connected with materials and preparation methods used. Inhomogeneous regions include low dielectric polymer regions with few charge sites and regions with high local site densities. Surface regions of plasticized liquid membranes often are low in sites and high in plasticizer or exuded impurities.

Source:

PAC, 1994, 66, 2527 (*Recommendations for nomenclature of ionselective electrodes (IUPAC Recommendations 1994)*) on page 2531