cubic system with the following lattice parameters. $LaMg_2CoMnO_6$ — a = 16,761±0,062 Å, V^0 = 4708,69±0,019 Å^3, Z = 6, $V^0_{el.cell}$ = 787,78±0,03 Å^3, $\rho_{x\text{-}ray.}$ = 5,78, $\rho_{pycn.}$ = 5,84±0,10 g/cm^3; $LaCa_2CoMnO_6$ — a = 16,650±0,026 Å, V^0 = 4609,11±0,06 Å^3, Z = 6, $V^0_{el.cell}$ = 768,19±0,01 Å^3, $\rho_{x\text{-}ray.}$ = 5,63, $\rho_{pycn.}$ = 5,56±0,10 g/cm^3; $LaSr_2CoMnO_6$ — a = 16,711±0,034 Å, V^0 = 4666,59±0,09 Å^3, Z = 6, $V^0_{el.cell}$ = 777,77±0,02 Å^3, $\rho_{x\text{-}ray.}$ = 6,44, $\rho_{pycn.}$ = 6,37±0,11 g/cm^3; $LaBa_2CoMnO_6$ — a = 16,840±0,030 Å^3, V^0 = 4775,58±0,09 Å^3, Z = 6, $V^0_{el.cell}$ = 795,3±0,02 Å^3, $\rho_{x\text{-}ray.}$ = 7,09, $\rho_{pycn.}$ = 6,95±0,09 g/cm^3. The new indicator electrodes through carbon paste modified cobalt-manganite $LaM^{II}_2CoMnO_6$ (M^{II} — Mg, Ca, Sr, Ba) were created. The main characteristics of the electrode (the slope of the electrode function, selectivity factor and response time) of carbon-paste ion-selective electrodes were determined. It is seen that in the case of all four electrodes are showing an ion exchange function. It is shown that carbon-paste electrodes were characterized by satisfactory stability of stationary potential when used in direct potentiometry.

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