

# Partial molar volumes of ionic liquid 1-butyl-3-methylimidazolium tetrafluoroborate in n-donor solvents

Kiselev V., Shakirova I., Konovalov A.

*Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia*

---

## Abstract

The values of partial molar volume (PMV) of ionic liquid, 1-butyl-3-methylimidazolium tetrafluoroborate were determined in twelve n-donor solvents and compared with the known values of PMVs of lithium and magnesium perchlorates in the same solvents. The proportionality in the change in the molar volumes of these salts and the predominant contribution of anion solvation were observed. The values of PMVs of the 1-butyl-3-methylimidazolium cation were calculated. © 2012 Springer Science+Business Media New York.

<http://dx.doi.org/10.1007/s11172-012-0074-x>

---

## Keywords

1-butyl-3-methylimidazolium tetrafluoroborate, molar volume, partial molar volume, solvent effect