

## **Bis(dialkylphosphinylmethyl)alkylamines as the liquid and membrane extractants of rare earth and trace metal ions**

Davletshina N., Cherkasov R., Garifzyanov A., Valeeva M., Koshkin S., Davletshin R., Leonteva S.  
*Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia*

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### **Abstract**

A large number of new lipophilic mono- and bisphosphinylamines were synthesized on the basis of the Kabachnik-Fields reaction and extraction and membrane transport properties of the synthesized compounds toward the rare earth and alkaline metal were studied. Aminophosphonyls demonstrate extracting efficiency and selectivity toward Sc(III), In(III), Y(III), and Ga(III) rare earth elements. The mixture of reactants bis(dialkylphosphinylmethyl)alkylamine, and thio- and dithiophosphoric acid shows selectivity toward lithium ions. © 2013 Copyright Taylor and Francis Group, LLC.

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### **Keywords**

Aminophosphoryl compounds, extraction properties, rare earth metals