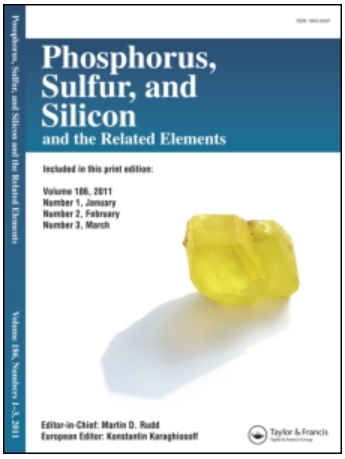

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A Study of Ammonium Mono-, Di- and Triphosphate Heterogeneous Systems in View of Their Use as Liquid Fertilizers

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A STUDY OF AMMONIUM MONO-, DI- AND TRIPHOSPHATE HETEROGENEOUS SYSTEMS IN VIEW OF THEIR USE AS LIQUID FERTILIZERS

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Ammonium phosphates belong among principal compounds of multicomponent liquid fertilizers and thus this study has been directed toward agrochemical application. The system $NH_4H_2PO_4$-$(NH_4)_2H_2P_2O_7$-$(NH_4)_3H_2P_3O_{10}$-$(NH_4)_3PO_4$-$(NH_4)_4P_2O_7$-$(NH_4)_5P_3O_{10}$-H_2O was studied in which the pH of saturated solutions varies from 5 to 8. The solubility was studied in the partial pseudoternary systems. The experimental temperatures were selected immediately above the corresponding cryohydratic points, from 0 to -8 °C. The results were discussed using a computer. The procedure used makes it possible to find a smoothing equation for each branch of the solubility diagram at issue. Simultaneously, a set of coefficients Q related to the ideality of the respective solutions was found. From practical point of view, it can be seen from the results obtained that the highest concentrations of agrochemically effective components(nitrogen and phosphorus pentaoxide) are attained in saturated solutions containing triphosphate with a nutritional value of more than 50%.