
Identification of Tetramethylammonium Ion in Methylated NH₄-Bentonite

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Abstract: Treating NH₄-bentonite with diazomethane results in methylation of adsorbed ammonium with the formation of the tetramethylammonium ion. This ion, which can be completely removed through ion exchange, is distinguished in the IR spectrum by a strong band at 1480 cm⁻¹ due to CH₃ group bending vibrations. X-ray diffractograms, CEC, and surface area of the clay are not modified by treatment with diazomethane.

Key Words: Bentonite • Diazomethane • Exchange • Montmorillonite • Tetramethylammonium

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