

Adsorption of Trimethyl Phosphite on H-KA, H-NaA, H-CaA and H-NaX Zeolites: an IR Study

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Infrared spectroscopy has been used in adsorption studies of trimethyl phosphite (TMP) on the hydrogen (H) form of the A-type and 13X zeolites. Infrared spectra of H-zeolites, except H-KA, show that TMP reacts rapidly with silanol hydroxyls on their surfaces and gives rise to form product molecules such as SiOCH_3 and liquid dimethyl phosphite. The unaccomplished adsorption on the H- KA zeolite has been attributed to the occurrence of stable KOH hydroxyls with not-exchanged K cations instead of SiOH hydroxyls on this zeolite.

Key words: IR; TMP; H-KA; H-NaA; H-CaA and H-NaX Zeolites.