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Pitfalls in X-Ray Diffraction Methods of Analysis for Impurities in ~~Cosmetic~~ Talc Powders

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ABSTRACT

X-Ray diffraction examination of materials for the detection of impurities or contaminants is an excellent screening technique. However, the method does have limitations resulting from interferences, errors in interpretation of data, and levels of detection.

Examples of pitfalls in the analyses of talcums resulting from interpretation and/or interference errors include: amphibole species identification; effect of presence of chlorite, kaolinite, halloysite, and dickite; significance of morphological varieties; and sample preparation problems.

Methods for the elimination or reduction of these problems include special x-ray diffraction techniques and microscopic techniques (both optical and electron).

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