

# Assessment of Prevalence of Non-tuberculous Mycobacteria in Archival Acid-fast Bacilli Positive Smear Slides by TaqMan Real-time PCR Assay.

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## Source

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## Abstract

### BACKGROUND:

The emergence of non-tuberculous mycobacteria as clinically relevant pathogens has necessitated us for the study of these organisms in the context of their environment. Differentiation of Mycobacterium tuberculosis complex and non-tuberculous mycobacteria is important especially when we have a positive smear slide test result.

### AIM:

In this study, we planned to survey the prevalence of tuberculosis and non-tuberculous mycobacteria among archival acid-fast bacilli positive smear slides.

### MATERIALS AND METHODS:

A number of 200 acid-fast bacilli positive smear slides were collected from different parts of Sistan and Baluchestan Province, the biggest province of Iran with the highest incidence of tuberculosis. The presence of mycobacterial IS6110 was evaluated in slides' scraped material by TaqMan real-time polymerase chain reaction assay.

### RESULTS:

The real-time polymerase chain reaction tests of archival acid-fast bacilli positive smear slides showed that 121 slides from 200 examined slides had M. tuberculosis DNA and in the remaining 79 examined slides, M. tuberculosis DNA was not found.

### CONCLUSION:

Our findings showed that there was no M. tuberculosis DNA in 14.5% of archival AFB positive smear slides, and this finding necessitates us to reviewing our diagnostic and anti-tuberculous protocols.

### KEYWORDS:

PCR, Tuberculosis, nontuberculous, polymerase chain reaction, real-time