

# Turkish Journal of Medical Sciences

Turkish Journal



of

Medical Sciences

Possible Microbial Contamination During the Development of Intra-Oral Films

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 [Keywords](#)  
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**Abstract:** The level of possible microbial cross-contamination in an automatic dental radiograph processor was investigated. Pure cultures of Staphylococcus aureus ATCC 6538 P, Escherichia coli ATCC 1103 and Candida utilis ATCC 18804 and a mixed culture of these three microorganisms were prepared. In the first five days of the week, 90 films contaminated with one of these pure cultures were developed. This was followed by the processing of 36 uncontaminated films that were developed in the last two days of the week. The same procedure was repeated for the remaining two pure and mixed microbial cultures. During the study, microbial samples were taken at the end of every day, from the inlet and outlet rollers of the automatic film processor, from the first and second developing solutions and from the intraoral films. Microbiologic counts were made using the pour plate method. The maximum contamination level was observed on the films immersed in the mixed culture; however, no or minimal contamination was established with the films kept in pure cultures. Microorganisms were found on uncontaminated films that were developed with the processing solution of the mixed culture group.

**Key Words:** Cross-contamination, intra-oral films, microorganisms

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Turk J Med Sci 2000; **30**(6): 601-604.

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Other articles published in the same issue: [Turk J Med Sci, vol.30, iss.6.](#)