

Evaluation of compounding practices that increases the risk of microbial spoilage of pharmaceutical products in Jordanian community pharmacies

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Al-Zaytoonah University of Jordan, 2021

Abstract

Pharmaceuticals are used in a variety of ways, including prevention, treatment, and diagnosis of diseases. The aim of this study is to investigate the prevalence and the rate of contamination of utilized water in compounding practices in Jordanian pharmacies. This study is divided into two parts. The first part is the microbial study, where we collected 50 samples of water, used in drug compounding in the pharmacies, filtered the water and cultured the filtrate on MEndo agar and plate count agar. Contaminated samples had *Escherichia coli* (*E.coli*) that gave red colonies with green metallic sheen, Identification by gram staining and biochemical test. The isolated bacterial colonies had a tendency of having antibiotic resistance. The second part of the study was based on cross-sectional questionnaire which included ninety randomized pharmacies. Information we as collected via face-to-face interviews. Findings from this study recommended that there is a necessitate for standardizing the compounded item formularies, item quality testing, and expiration date of compounded products. Also a strict control over aseptic techniques should be implemented to prevent the spread of microbial contamination during drug compounding.

Key words: Drug compounding, *Escherichia coli*, Microbial Contamination, Water, .