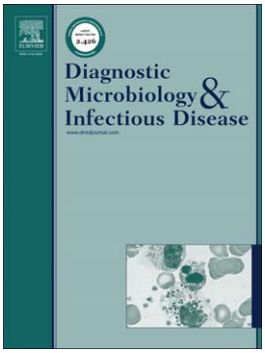

Comparison of Uriswab to alternative methods for urine culture collection and transport: confirmation of standard culture methodology for investigation of urinary tract infections

Robert P. Rennie, Lee-Ann Turnbull, Kaylee Gauchier-Pitts, Tracy Bennett, Debbie Dyrland, Susan Blonski

PII: S0732-8893(16)30123-7
DOI: doi: 10.1016/j.diagmicrobio.2016.05.001
Reference: DMB 14084

To appear in: *Diagnostic Microbiology and Infectious Disease*

Received date: 5 February 2016
Revised date: 8 April 2016
Accepted date: 4 May 2016

Please cite this article as: Rennie Robert P., Turnbull Lee-Ann, Gauchier-Pitts Kaylee, Bennett Tracy, Dyrland Debbie, Blonski Susan, Comparison of Uriswab to alternative methods for urine culture collection and transport: confirmation of standard culture methodology for investigation of urinary tract infections, *Diagnostic Microbiology and Infectious Disease* (2016), doi: 10.1016/j.diagmicrobio.2016.05.001

Comparison of Uriswab to alternative methods for urine culture collection and transport: confirmation of standard culture methodology for investigation of urinary tract infections.

Robert P. Rennie[1], Lee-Ann Turnbull[1], Kaylee Gauchier-Pitts[1], Tracy Bennett[2], Debbie Dyrland[2], Susan Blonski[3].

Laboratory Medicine and Pathology, University of Alberta Hospital, Edmonton, AB[1], Red Deer Regional Hospital, Red Deer AB[2], and Banff Mineral Springs Hospital, Banff, AB[3], Canada.

Keywords: Urine preservation, Uriswab, BD Vacutainer, Urine culture paddle.

Abstract.

The ability to isolate and identify causative agents of urinary tract infections relies primarily on the quality of the urine sample that is submitted to the microbiology. The most important factors are the method of collection, the maintenance of viability of the potential pathogens during transport, and standardization of the culturing of the urine sample. This report is a composite of several investigations comparing collection and transport on urine culture paddles, with a preservative urine sponge (Uriswab), and a comparison of Uriswab with the BD preservative transport tube as methods of preservation of urinary pathogens. Primary studies showed that Uriswab maintained significantly more urinary pathogens than the urine culture paddle with fewer mixed or contaminated cultures. The two preservative transport systems were comparable for maintenance of viability of the pathogens, but there were fewer mixed cultures when samples were collected with Uriswab. This study confirms the importance of a standard volume of 1 µL of urine for culture.

Introduction.

Elucidation of the true pathogens associated with a urinary infection is often difficult. Quantitation, identification and antimicrobial susceptibility testing is predicated on initial appropriate collection, ensuring that transport is performed in such a way as to preserve the right pathogen at the correct concentration, and third, that what is assumed to be the pathogen is actually causing an infection.

Recent literature suggests that laboratory results on what was previously considered to be the causative agent in a particular sample may not be the case. Based on outcome studies in hospitalized patients, Kwon and