to go for clinical collection. Aim of this study was to evaluate the performance of a new Home-based Self Vaginal FLOQSwab™ (HBHSV - COPAN Italia, Brescia) in combination with a commercially available real-time PCR assay, Anyplex II STI-7 (Seegene, Seoul, Korea) which detects seven major pathogens in a single reaction (Chlamydia trachomatis - CT, Neisseria gonorrhoeae - NG, Trichomonas vaginalis - TV, Mycoplasma hominis - MH, Mycoplasma genitalium - MG, Ureaplasma urealyticum - UU, and Ureaplasma parvum - UP).

Methods A total of 78 asymptomatic donors, employees of a private industry (aged 18 to 45 years) were voluntarily enrolled to STIs screening. The subjects answered to a standardised anonymized questionnaire regarding the easy of use of self vaginal collection. The new HBHSV swab was collected in a domestic context by following the detailed “how to use it” instructions. After collection, the HBHSV swabs were shipped at room temperature to the laboratory in Pievesestina and processed within five weeks. The threshold cycle value (Ct) of a human genomic target (internal control, IC) and Ct of pathogens (CT, NG, TV, MH, MG, UU, UP) were determined as parameters to assess respectively, the efficiency of self-sampling and presence of any inhibitor effects, the stability of nucleic acids on dry swabs.

Results no failure results have been observed, the IC of all samples were amplified (average Ct 30). The real time PCR assay was able to identify 2/78 CT, 4/78 UU, 40/78 UP, 6/78 MH, 1/78 TV positive patients. No MG and NG positive patients have been detected. Women reported self-collection with HBHSV easy and comfortable (100%).

Conclusion the new HBHSV device showed excellent recovery and stability of nucleic acid of STI pathogens up to 5 weeks at room temperature. The HBHSV is suitable for screening of STIs with real-time PCR assay.

P1.58 LACTIC ACID EXERTS ANTI-CHLAMYDIA TRACHOMATIS ACTIVITY ON THE EPITHELIUM BY REDUCING HOST CELL PROLIFERATION

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Introduction Epidemiological studies have demonstrated that the vaginal microbiota can significantly impact the risk of acquiring sexually transmitted infections. The human vagina often contains Lactobacillus spp., which produce lactic acid and create an acidic environment (pH 3.5–4) thought to reduce vaginal STIs. Unlike high d-lactate producers, Lactobacillus spp. that produce low amounts or no d-lactate, while producing L2. Proliferation and infectivity were evaluated by microscopy. Lactobacillus spp. afforded maximal protection against l-lactate producers. Chemical cell proliferation inhibitors dramatically reduced C. trachomatis infectivity.

Conclusion These results suggest a differential role for vaginal Lactobacillus spp. in protecting against C. trachomatis infections and potentially other STIs. This protection is driven by the production of d-lactate, which acts on epithelial cells by inhibiting cell proliferation, which appears to be required for infection.