

Sterile Uterine Sampler Cover for the Diagnosis and Treatment of PID

Researchers at the University of South Florida have developed a novel single-use Sterile Uterine Sampler Cover (SUSC) device that can be used to collect uncontaminated samples from the uterus as well as for drug delivery.

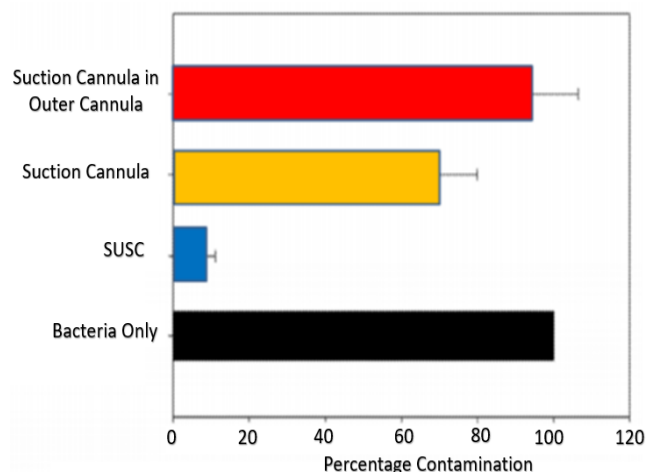
PID (Pelvic Inflammatory Disease) is a polymicrobial infection of the female reproductive tract that is associated with pelvic pain, abnormal uterine bleeding, and tubal damage that can lead to ectopic pregnancies and infertility. The disease is one of the most common causes of morbidity in women worldwide, affecting nearly one million in the United States. Current diagnostic methods are limited due to the difficulty of extracting uncontaminated endometrium above the naturally contaminated vagina. Accurate diagnosis of uterine infections heavily relies on effective removal of uncontaminated samples from the uterus, thus, establishing a need for a device that can help retrieve these samples without contaminating it from its surroundings. While the SUSC has its use for diagnosis of PIDs it also can be used for treatment purposes as well. With its patented nanoparticle delivery method a drug can be encapsulated by chitosan nanoparticles and delivered directly to the pelvis for treatment.

Scientists at USF have developed a new SUSC device capable of collecting uncontaminated samples from the endometrium for a more accurate diagnosis and treatment of PID. Additionally, it can be positioned within the vagina to deliver medication directly into the uterus with the help of an attached plunger. Thus, this invention not only demonstrates the methodology to diagnose and treat PID, but also manifests the potential to improve gynecological and obstetrical practices for this disease.

ADVANTAGES:

- More sanitary, safe, and effective collection of uncontaminated samples
- Diagnostic and treatment potential for pelvic disorders/infections
- Accurate diagnosis of uterine infections
- Site specific drug delivery method

Improved Diagnostic and Treatment Device for Pelvic Inflammatory Disorders



Comparison of Specimen Contamination of SUSC and Other Various Retrieval Methods

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