



Research Use Only

UTI Detection



Urinary Tract
Infection

DETECTION OF Urinary Tract Infection

Detection of 6 UTI - causing Bacteria within 6 hours



Urinary Tract Infection

▶ Super Multiplex PCR

Simultaneous detection of multiple pathogens by just one-time PCR

▶ Seeplex® PCR with High Specificity and Sensitivity

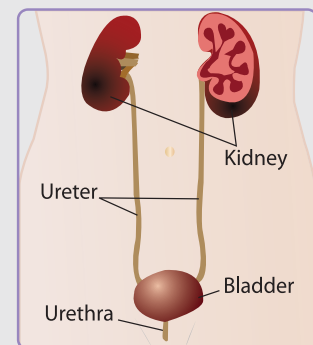
▶ Low Cost and Fast Result

▶ Applicable for Automatic System

Automatic sample preparation, detection and analysis
Rapid and easy interpretation

U Urinary Tract Infections (UTIs)

- The second most common infection following respiratory infections.
- Occur when bacteria (*E. coli*) from the digestive tract get into the opening of the urinary tract and multiply.
- Bacteria first infect the urethra, then move to the bladder and finally to the kidneys.
- Tend to occur more in women than men.



U Classification of UTIs

Community-acquired infection

- 70% of infections are community acquired, usually caused by *E. coli* from patient's own bowels.

Hospital-acquired infection

- Usually *E. coli*, but *Pseudomonas* and *Staphylococci* are important causes.
- Urinary catheters are a common source of infection
- Contributes to the mortality of patients and increases the duration and cost of hospitalization.

U Incidence of UTIs

- Among adults aged 20 to 50 year, UTIs are about 50-fold more common in women.
- An estimated 3% of girls and 1% of boys have had a UTI by the age of 11.
- One woman in five develops a UTI in her lifetime.

U UTIs in women

Women may have more UTIs than men because:

- they have a shorter urethra, allowing quicker access to the bladder.
- the urethral opening is near the anus.
- intercourse may result in UTIs in women.



Product	Cat. No.	Size	Specimen
UTI ACE Detection	UT6601Y	50 rxns	Mid-stream urine specimen

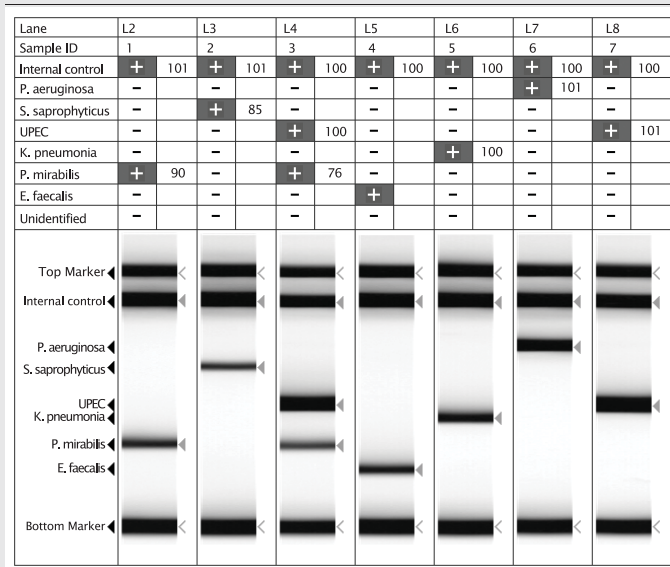
Pathogen List of Seeplex® UTI ACE Detection

- Uropathogenic *E.coli* (UPEC)
- *Proteus mirabilis*
- *Klebsiella pneumonia*
- *Staphylococcus saprophyticus*
- *Pseudomonas aeruginosa*
- *Enterococcus faecalis*



Example of Test Result

Seeplex® UTI ACE Detection



Sample	Result
1	<i>P. mirabilis</i>
2	<i>S. saprophyticus</i>
3	UPEC, <i>P. mirabilis</i>
4	<i>E. faecalis</i>
5	<i>K. pneumoniae</i>
6	<i>P. aeruginosa</i>
7	UPEC

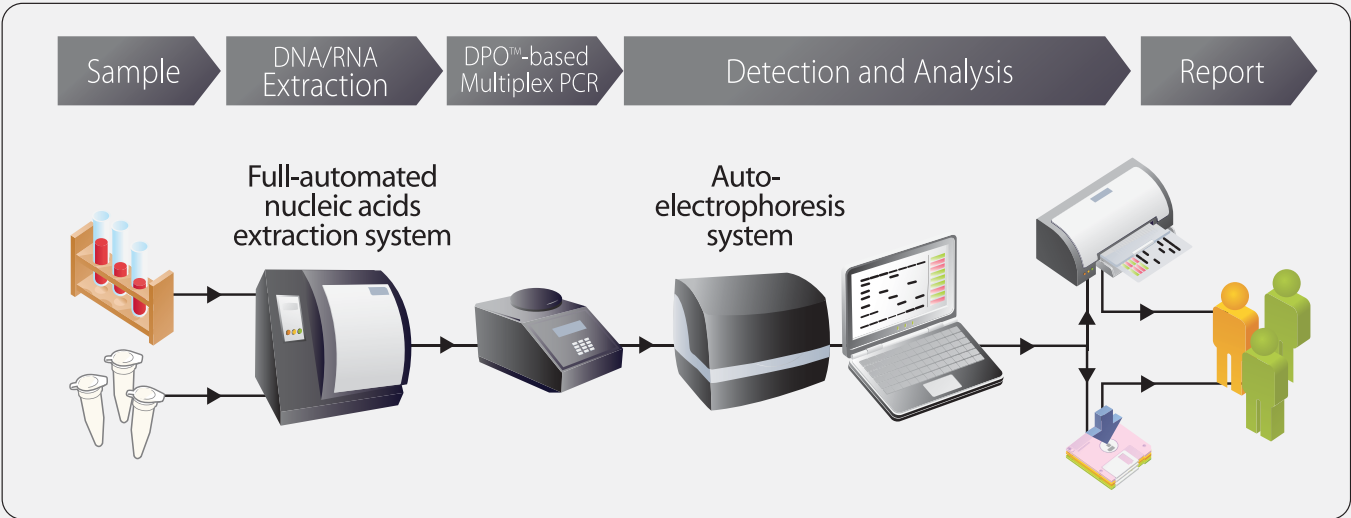
Rapid and easy interpretation using auto-electrophoresis (ScreenTape® System)

1~7: Clinical samples (ScreenTape® System, Lab901 Limited)

References:

1. Russo TA, Johnson JR. Medical and economic impact of extraintestinal infections due to *Escherichia coli*: focus on an increasingly important endemic problem. *Microbes Infect.* 2003;5:449-56. DOI: 10.1016/S1286-4579(03)00049-2.
2. Karlowsky JA, Kelly LJ, Thomsberry C, Jones ME, Sahm DF. Trends in antimicrobial resistance among urinary tract infection isolates of *Escherichia coli* from female outpatients in the United States. *Antimicrob Agents Chemother.* 2002;46:2540-5.
3. Fluit AC, Schmitz FJ, Verhoef J, European SENTRY Participant Group. Frequency of isolation of pathogens from bloodstream, nosocomial pneumonia, skin and soft tissue, and urinary tract infections occurring in European patients. *Eur J Clin Microbiol Infect Dis* 2001;20:188-191.
4. Kidney and Urology Foundation of America. Weighted Analysis of 1988-1994 NHANES, 2003, NIDDK.

Seeplex[®] Automatic Detection System



Seeplex[®] Key Products

Meningitis	Detection of viruses and bacteria causing Meningitis
Diarrhea	Detection of viruses and bacteria causing Diarrhea
Somatic Mutation	Detection of BRAF mutation (V600E) characteristic for papillary thyroid carcinoma
Respiratory Pathogen	Detection of 12, 6, or 7 Respiratory viruses Detection of 6 Pneumonia bacteria Detection of 13 Respiratory viruses and 5 Pneumonia bacteria
HPV	Screening for HPVs (16, 18, High-risk, and Low-risk common) Screening for 2 STD pathogens (CT, NG) and HPVs (High-risk, Low-risk common)
STD	Detection of 6 STD pathogens Screening for 2 STD pathogens (CT, NG) and HPVs (High-risk, Low-risk common)
Drug Resistance	Detection of Vancomycin-resistant Enterococci (van A, van B) Detection of Clarithromycin-resistant H. pylori (A2143G, A2142G) Detection of Lamivudine-resistant HBV (YVDD, YIDD, L528M, YSDD)
SNP	MTHFR C677T/A1298C genotyping CYP2C19 genotyping ApoE genotyping
TB	MTB and NTM discrimination for culture specimens MTB and M. bovis BCG discrimination for various specimens MTB Detection for various specimens (Nested PCR or Single PCR)

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