

TM 1267 - MYCOPLASMA UROGENITAL MEDIUM BASE

INTENDED USE

For selective isolation of *Mycoplasma hominis* and *Ureaplasma urealyticum*.

PRODUCT SUMMARY AND EXPLANATION

The two *Mycoplasma* Species *Mycoplasma hominis* and *Ureaplasma urealyticum*, have been implicated in urogenital infections in men and women. The organisms are also much smaller than most bacteria measuring 0.2 to 0.3 μm , hence they are able to pass through bacteriological filters. These organisms differ from other bacteria in that they lack a rigid cell wall. Individual cells are bound only by trilaminar unit membrane. Thus cultivation of *Mycoplasma* and *Ureaplasma* requires an enriched medium containing precursors for nucleic acid, protein and lipid biosynthesis. Precursors for nucleic acids and proteins are provided principally by the enriched basal peptone medium and yeast extract, while lipids are provided by the inclusion of serum. In fact, one of the principle criteria used in the taxonomic classification of these organisms is the requirement for the complex lipid cholesterol in the growth medium by certain *Mycoplasma* and *Mycoplasma*-like organisms. Urogenital Mycoplasma Broth Base (Mycoplasma Urogenital Broth Base) is based on the formula used by Bebear et al, Fiacco et al, Bonissol and Daoulas, Renaudin et al and Bauriaud et al. This medium is used for selective cultivation of urogenital *Mycoplasma*, viz. *M. hominis* and *U. urealyticum* from clinical samples.

U. urealyticum usually causes a colour change in the broth within 24 hours except when the titre is low, the change is observed within 48 hours. *M. hominis* usually causes the colour change within 48 hours. When the titre is high, the colour change occurs within 24 hours. A negative broth should remain clear or may show a faint haze. High turbidity in the broth indicates presence of contaminants.

COMPOSITION

Ingredients	Gms / Ltr
Heart infusion powder	8.000
Casein enzymic hydrolysate	8.000
Yeast extract	4.000
Sodium chloride	3.500
Arginine hydrochloride	5.000
Cysteine hydrochloride	0.100
Phenol red	0.050

PRINCIPLE

The medium contains casein enzymic hydrolysate and heart infusion powder, which provide necessary nutrients for the growth of *Mycoplasma* and *Ureaplasma*. Yeast extract provides preformed nucleic acid precursors, necessary for the growth of fastidious *Mycoplasma*. Many *Mycoplasmas* require serum for their good growth and also presence of antibiotics (present in Mycoplasma Urogenital Selective Supplement, is necessary to prevent the growth of accompanying microbial flora. Sodium chloride maintains the osmotic balance. Phenol red acts as a pH indicator. *M. hominis* metabolizes arginine to ammonia via ornithine by a three enzyme system, resulting in increase in the pH of the medium which is indicated by a colour change to red. *Ureaplasma* possess the enzyme urease and breakdown urea to ammonia indicated by a colour change to red-orange. Additional tests are required for the differentiation between *M. hominis* and *U. urealyticum*.

INSTRUCTION FOR USE

- Dissolve 14.33 grams in 425 ml distilled water.
- Heat if necessary to dissolve the medium completely.



- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool the medium and aseptically add rehydrated contents of 1 vial of Vitamin Growth Supplement, 1 vial of Urea Solution, 50 ml Horse serum and 1 vial of Mycoplasma Urogenital Selective Supplement.
- Mix well and dispense as desired.

QUALITY CONTROL SPECIFICATIONS

- Appearance of Powder** : Light yellow to pink homogeneous free flowing powder.
- Appearance of prepared medium** : Reddish pink coloured clear solution in tubes.
- pH (at 25°C)** : 6.3±0.2

INTERPRETATION

Cultural response observed after an incubation with added Vitamin Growth Supplement, Urea Solution, Horse Serum and Mycoplasma Urogenital Selective Supplement.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Arginine	Urea	Incubation Temperature	Incubation Period
<i>Mycoplasma hominis</i>	14027	50-100	Good-luxuriant	Positive reaction, red colour	Negative reaction, no colour change	35 - 37°C	2 to7 Days
<i>Ureaplasma urealyticum</i>	27618	50-100	Good-luxuriant	Positive reaction, red colour	Positive reaction, red-orange colour	35 - 37°C	2 to7 Days

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Bebear C., De Barbeyrac B., Bernet C., Renaudin H., 1989, Ann. Biol. Clin., 47, 415-420.
2. Fiacco V., Miller M. J., Carney E., Martin W. J., 1984, J. Clin. Microbiol., 20, 882-865.
3. Bonissol C., Daoulas-Lebourdelles F., 1979, Sem. Hop. Paris, 13-14, 670-677.
4. Bebear C., Renaudin H., Maugeim J., De Barbeyrac B., Clerc M. T., 1990, Zsntalblatt 20, 77-82.
5. Renaudin H., Quentin C., De Barbeyrac B., Bebear C., 1988, Pathologie Biologie, 36-496-499.
6. Bauriaud R., Seror C., Lareng M. B., Lefevre J. C., 1992, Pathologie Biologie, 40, 479-482.
7. Tully J. G., Taylor-Robinson D., 1986, Pediatr. Infect. Dis. 5: 5292-5295.



 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP Authorized Representative <small>MedNet GmbH Buckstrasse 10, 49163 Muenster, Germany</small>	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**
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