

## HHD BROTH

Medium for differentiation of heterofermentative and homofermentative lactic acid bacteria.

TYPICAL FORMULA	(g/l)
Tryptocasein	10.0
Casamino Acids	3.0
Soy Peptone	1.5
Fructose	2.5
Potassium Dihydrogen Phosphate	2.5
Yeast Extract	1.0
Sucrose	0.2
Bromcresol Green	0.066

Final pH = 7.0 ± 0.2 at 25 °C.

### DIRECTIONS

Suspend 20.8 g of powder in 1 liter of distilled or deionized water. Add 1 g of Tween 80 supplement (code 80031). Heat to boiling and shake until completely dissolved. Distribute into final containers. Autoclave at 121 °C for 15 minutes.

### DESCRIPTION

HHD BROTH is used for the detection and the differentiation of heterofermentative and homofermentative lactic acid bacteria. The heterofermentative lactic acid bacteria produce CO<sub>2</sub>, lactic acid, acetic acid, ethanol and mannitol from hexoses; the homofermentative lactic acid bacteria produce mainly lactic acid from hexoses.

### TECHNIQUE

Inoculate the medium with the sample to be tested using a sterile loop and incubate at 30 °C for 3 days. The homofermentative bacteria produce a color change of Bromcresol Green from blue to green, with a blue-green cellular sediment on the bottom of the tube. The heterofermentative bacteria produce a slighter acidification of the substrate without a significant change of the medium color which remains blue with a white cellular sediment.

### QUALITY CONTROL

#### Dehydrated medium

Appearance: free-flowing, homogeneous.

Color: beige.

#### Prepared medium

Appearance: clear.

Color: blue.

Incubation conditions: 30 °C for 3 days.

Microorganism	Growth	Characteristics
<i>Lactobacillus plantarum</i>	good	green medium
<i>Lactobacillus mesenteroides</i>	good	blue medium
<i>Escherichia coli</i>	good	green medium
<i>Proteus mirabilis</i>	good	blue medium

### STORAGE

The powder is very hygroscopic: store the powder at 10-30 °C, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident.

Store prepared tubes at 2-8 °C.

### REFERENCES

1. Mc Donald, L.C. , Mc Feeters, R.F. Daeschel, M.A. Fleming, H.P. (1987). App. Environ. Microbiol. **53**, 1382-1384.




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**PRESENTATION**

Product	REF	
HHD BROTH (24.0 l)	610064	500 g
HHD BROTH (4.8 l)	620064	100 g

**TABLE OF SYMBOLS**

<b>LOT</b> Batch code	 Caution, consult accompanying documents	 Manufacturer	 Contains sufficient for <n> tests	 Keep away from heat source
<b>REF</b> Catalogue number	 Fragile, handle with care	 Use by	 Temperature limitation	



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