

Brettanomyces Selective Broth

Intended use

Recommended for the selective cultivation and enrichment of Brettanomyces species.

Composition**

Ingredients	Gms / Litre
Yeast extract	3.000
Malt extract	3.000
Peptone	5.000
Dextrose (Glucose)	10.000
Chloramphenicol	0.100
Thiamine	0.010
Captan	0.100
Gentamicin	0.050
Final pH (at 25°C)	53 + 02
**Formula adjusted, standardized to suit performance parameters	5.5 ± 0.2

Directions

Suspend 21.26 grams in 1000ml of purified/distilled water. Heat if necessary to dissolve the medium completely by agitating frequently. Dispense in tubes or flasks as desired and boil for ten minutes. **DO NOT AUTOCLAVE.**

Principle And Interpretation

Brettanomyces Selective Broth is a medium used for the enrichment of *Brettanomyces* of wines. *Brettanomyces* is a genus of yeast capable of growing in high concentrations of alcohol and of fermenting sugars that have not been used by *Saccharomyces cerevisiae* during fermentation. The presence of *Brettanomyces* is associated with the appearance of strange wine aromas. *Brettanomyces* is also called Dekkera (name given to species with sexual reproduction and therefore formation of spores by meiosis). *Brettanomyces* is generally found in red wines in barrels or bulk storage, since acids necessary to form some of the indicative aromas are extracted from grape skins.

Brettanomyces contaminations have also been found in Chardonnay and Sauvignon Blanc. Dextrose is the fermentable carbohydrate providing carbon and energy. Peptone and malt extract provide nitrogen, vitamins, minerals and amino acids essential for growth. Brettanomyces Selective Media is recommended by APHA (1) for isolation and cultivation of *Brettanomyces* species. Yeast extract is source of vitamins, particularly the B-group. Thiamine is a growth factor. Selective agents are added to improve *Brettanomyces* recovery through the inhibition of common contaminants as *Saccharomyces cerevisiae*.

Type of specimen

Brewery samples

Specimen Collection and Handling:

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.

- 2.Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.
- 3. Further biochemical testing is required for complete identification.

M2122

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow coloured homogeneous free flowing powder

Colour and Clarity of prepared medium

Yellow coloured clear solution

Reaction

Reaction of 2.13% w/v aqueous solution at 25°C. pH : 5.3±0.2

pН

5.10-5.50

Cultural Response

Cultural characteristics observed after an incubation at 25-30°C for 7 days

Organism	Inoculum	Growth
	(CFU)	
Salmonella Typhimurium ATCC 14028 (00031*)	≥10 ⁴	Inhibition
Escherichia coli ATCC 25922 (00013*)	$\geq 10^{4}$	Inhibition
Enterococcus faecalis ATCC 29212 (00087*)	≥10 ⁴	Inhibition
Saccharomyces cerevisiae ATCC 9763 (00058*)	$\geq 10^{4}$	Inhibition
Dekkera anomala ATCC 10562	50-100	Good
Dekkera bruselensis ATCC 36234	50-100	Good

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store between dehydrated and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (2,3).

Reference

1.Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods,5th Ed., American Public Health Association, Washington, D.C.

2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.

3.Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

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Disclaimer :

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