17218 Tomato Juice Broth

For the cultivation of yeasts and other aciduric microorganisms like lactobacilli.

Composition:

Ingredients	Grams/Litre
Tomato juice solids	20.0
Yeast extract	10.0
Dextrose	10.0
Dipotassium phosphate	0.5
Monopotassium phosphate	0.5
Magnesium sulfate	0.2
Sodium chloride	0.01
Ferrous sulphate	0.01
Manganese sulphate	0.01

Final pH 6.7 +/- 0.2 at 25°C

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C. Use before expiry date on the label.

Appearance: Faintly beige coloured, homogeneous, free flowing powder.
Gelling: Firm
Color and Clarity: Slightly brownish-yellow coloured, clear solution, which may have slight precipitate.

Directions:
Suspend 41.23 g in 1 litre distilled water. Boil to dissolve the medium completely. Dispense in tubes and sterilize by autoclaving at 121°C for 15 minutes.

Principle and Interpretation:
Based on the formula of Kulp and White (1) tomato juice broth is intended for the cultivation of yeasts and other aciduric microorganisms. Lactobacilli are known to grow poorly on ordinary culture media and require special nutrients. Mickle and Breed successfully applied tomato juice to inhibit growth of microorganisms other than acidophilic bacteria (2). Dextrose represents an additional carbon source while yeast extract provides nitrogen carbon and vitamin B-complex. Potassium phosphates act as buffering agents. The several inorganic salts in low concentrations provide essential ions and support together with yeast extract the bacterial metabolism.

Cultural characteristics observed after 40-48 hours at 37°C.

Organisms (ATCC)	Growth
Lactobacillus caseii (9595)	+++
Lactobacillus leichmannii (4797)	+++
Saccharomyces cerevisiae (9763)	+++
Saccharomyces uvarium (9080)	+++

References:

1. Kulp J.W.L and White V., 1932, Science, 76:17
2. Mickle and Breed, 1925, Technical Bulletin 110, NY State, Agriculture Exp. Station.

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.