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Biotechnology Solutions Dipslides

Dipslides are used to monitor microbial growth in industrial and process fluids. Changes in population density should be taken into consideration when treatment levels are being determined.

The Dipslide technique has been applied industrially utilizing a combination of media suitable for bacterial growth on one side and fungal growth on the second side. Such slides are widely used for monitoring growth in cooling fluids such as those employed in machining and metal rolling. Microbial growth in water that accumulates in petroleum products can also be detected using dipslides.

The Dipslide technique permits the user to obtain a semi-quantitative results of bacteria and yeast cells present in the fluids tested. Mould levels are reported as nil, low, moderate, or heavy contamination as counts are not meaningful as a measure of mould contamination.

Biotechnology Solutions offers the following Dipslide configurations:

1. Bacteria / Bacteria – Medium: TSA / TSA
2. Bacteria/ Fungi – Medium: TSA / Malt Extract
3. Bacteria/Fungi – Medium: TSA / Rose Bengal

Bacteria Dipslide:

The Dipslide technique permits the user to obtain an adequately accurate, fast, simple method for counting bacterial cells present on the fluid tested. Bacteria will grow as red or colorless colonies. It is the number of colonies not the size of colonies that is important.

1. Type of medium: Nutrient Agar: **Tryptic Soy Agar with TTC**. (TSA)
2. Recommended for water and wastewater applications and standard methods for food testing.
3. Suitable for the cultivation of both aerobes and anaerobes.
4. Component and purpose:
    - Tryptone and soya peptone – Source of Nitrogen, vitamins and Carbon
    - Sodium Chloride – maintains osmotic balance in the medium
    - Agar – Solidifying agent
    - 2,3,5-triphenyltetrazolium Chloride (TTC) – Indicator, bacteria will reduce TTC to a red colored formazan dye. Bacterial colonies appear as red dots.
    - Final pH 7.3 $\pm$ 0.2 @ 25ºC.

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Fungi Dipslide:

Fungal (Yeast and Mold) contamination of fluids, ranging from cooling fluids to petroleum products, present serious problems to the industry. The Dipslide technique is recommended for the detection, isolation, and enumeration of yeasts and molds. Mold colonies are fuzzy and levels are reported as low, moderate or heavy contamination. There are 2 types of fungi medium available:

Malt Extract Agar

Component and purpose:

- Malt Extract – Source of Carbon, protein and nutrients.
- Mycological Peptone – Source of Nitrogen, vitamins and Carbon.
- Agar – Solidifying agent.
- Final pH 5.5 ± 0.2 @ 25ºC, the acidic pH allows for optimal growth of molds and yeast while restricting bacterial growth.

Rose Bengal Agar with Chloramphenicol

Component and purpose:

- Mycological Peptone – Source of Nitrogen, vitamins and Carbon.
- Dextrose – Source of Energy.
- Dipotassium Phosphate – Buffering agent.
- Magnesium Phosphate – Trace elements.
- Rose Bengal – inhibit bacterial growth and controls the growth of rapidly growing molds for easier count.
- Chloramphenicol – antibiotic.
- Agar – Solidifying agent.
- Final pH 7.2 ± 0.2 @ 25ºC, Neutral pH will support fungal growth.

CONTACT US

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