
Product Name : Aspergillus Agar Base (AFPA Base)

A selective identification medium for the detection of *Aspergillus flavus* and *Aspergillus parasiticus* from food.

TYPICAL FORMULA (G/L)

| | |
|-------------------------------|-------|
| Peptone | 10.0 |
| Yeast Extract | 20.0 |
| Ferric Ammonium Citrate | 0.5 |
| Dichloran | 0.002 |
| Agar | 15.0 |
| Final pH =6.3 ± 0.2 at 25°C. | |

DIRECTIONS

Suspend 45.5 G of powder in 1 L of distilled or deionized water. Heat to boiling and shake until completely dissolved. Sterilize in autoclave at 121°C for 15 minutes. Cool to 45-50°C. Aseptically 2 vials of Chloramphenicol supplement (MB-C1817). Mix well. Dispense in petri dishes.

Chloramphenicol supplement

1 Vial contents (Each vial is sufficient for 500 mL of medium)

Chloramphenicol 50.0 mg

DESCRIPTION

Aspergillus Agar Base (AFPA Base) is for isolating and enumerating yeasts and moulds in foods should support recovery of all viable propagules, restrict spreading moulds, inhibit bacterial growth and aid in the identification of the fungi.

TECHNIQUE

Process the food sample in a Stomacher using 40 G in 200 mL of 0.1% peptone water (Maximum Recovery Diluent). Alternatively add the sample to 0.1% peptone water and shake periodically for 30 minutes. Dilute the sample 1:10, 1:20 and 1:40 in 0.1% peptone water. Surface plate 0.1 mL of each dilution. Incubate at 30°C and examine after 42-43 hours. Count all colonies that show the reverse, yellow/orange pigmentation. Report the results as a number of colonies of *Aspergillus flavus* and *Aspergillus parasiticus* per gram of food.

Aspergillus oryzae can produce the same yellow/orange pigmentation. It is important in the production of Asian fermented foods, particularly soy sauce, and is only rarely isolated from other sources.

Aspergillus niger produces colonies of similar size and texture to *Aspergillus flavus* at 30°C. However, on the reverse the colonies may appear pale yellow but will never be yellow/orange. After 43 hours or longer incubation, colonies of *Aspergillus niger* remain pale yellow but begin production of black conidial heads which enables clear differentiation to be made from *Aspergillus flavus*.

QUALITY CONTROL

Dehydrated medium

Appearance: free-flowing, homogeneous.

Color: beige.

Prepared medium

Appearance: opalescent.

Color: amber.

Incubation conditions: at 30 ± 2°C / 43 hours.

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| Microorganism | ATCC | Growth | Characteristics |
|--------------------------------|-------|--------|--|
| <i>Aspergillus flavus</i> | 22547 | good | white mycelium, buff spores, orange underside |
| <i>Aspergillus parasiticus</i> | 28285 | good | white mycelium, cream spores, orange underside |
| <i>Aspergillus niger</i> | 16404 | good | white mycelium, black spores, yellow underside |
| <i>Escherichia coli</i> | 25922 | none | |

STORAGE

The powder is very hygroscopic: store the powder at room temperature, 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 plates at 2-6°C.

REFERENCES

1. Beuchat, L. R. (1984) J. Food Protection 47: 512-519.
2. Pitt, J. I., Hocking, D. & Glenn, D. R. (1983) J. Appl. Bact. 54: 109-114.
3. Bothast, R. J. & Fennell, D. I. (1974) Mycologia 66: 365-369.
4. King, D. A., Hocking, A. D. & Pitt, J. I. (1979) J. Appl. & Environ. Microbiol. 37: 959-964.
5. Jarvis, B. (1973) J. Appl. Bact. 36: 723-727.

PACKAGING

Cat. No : MB-A0697
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500 G