

Jaworski's Agar

Medium used for the cultivation of algae.

• CONTENTS (Liter)

Calcium Nitrate	0.02 g
Monopotassium Phosphate	0.0124 g
Magnesium Sulfate	0.05 g
Sodium Bicarbonate	0.0159 g
EDTAFeNa	0.00225 g
EDTA Disodium Salt	0.00225 g
Boric Acid	0.00248 g
Manganese Chloride	0.00139 g
Ammonium Molybdate	0.001 g
Cyanocobalamin	0.00004 g
Thiamine HCl	0.00004 g
Biotin	0.00004 g
Sodium Nitrate	0.08 g
Disodium Phosphate	0.036 g
Agar	15.0 g

Final pH = 7.0 ± 0.2 at 25°C .

• PROCEDURE

Suspend 15.22 G of powder in 1 L of distilled or deionized water. Heat to boiling until completely dissolved. Sterilize by autoclave at 121°C for 15 minutes. Cool to $45\text{-}50^{\circ}\text{C}$ in water bath. Mix well. Dispense in petri dishes.

• INTERPRETATION

Jaworski's Agar is a medium used for the cultivation of algae. *Chlorella* contains the green photosynthetic pigments chlorophyll-a and -b in its chloroplast. Through photosynthesis multiplies rapidly, requiring carbon dioxide, water, sunlight and a small amount of minerals, proper temperature and pH.

• TECHNIC

Inoculate the plates with spreading the specimen on surface of the medium using a sterile loop. Incubate at $28 \pm 1^{\circ}\text{C}$ for 7 days. Refer appropriate references for recommended test procedure.

• QUALITY CONTROL FOR USE

Dehydrated medium

Appearance: free-flowing, homogeneous.

Color: white.

Prepared medium

Appearance: clear.

Color: colorless.

Incubation conditions: $28 \pm 1^{\circ}\text{C}$ / 7 days

Microorganism	ATCC	Inoculum CFU	Growth
<i>Chlorella vulgaris</i>	30821	heavy	good

• STORE

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 medium at 2-8°C.

• REFERENCES

1. ANDERSEN, R.A. [ed.] 2005. Algal culturing techniques. Elsevier, Amsterdam, 578 pp.
2. SCHLÖSSER, U.G., 1982. Sammlung von Algenkulturen. - Ber.Dt.bot.Ges. 95: 181-276.
3. Mayo, A. W. and Noike, T. "Effects of temperature and pH on the growth of heterotrophic bacteria in waste stabilization pond," Water Res., 30(2), 447~455(1996).
4. Wu, Z. and Shi, X., "Optimization for high-density cultivation of heterotrophic *Chlorella* based on a hybrid neural network model," Lett. Appl. Microbiol., 44(1), 13~18(2007).
5. Tadesse, I., Green, F. B. and Puhakka, J. A., "Seasonal and diurnal variations of temperatures, pH and dissolved oxygen in advanced integrated wastewater pond system treating tannery effluent," Water Res., 38(3), 645~654(2004).

• PACKAGE

Cat. No : MB-J0841 Jaworski's Agar	500 G
---------------------------------------	-------