

CBS List of Media

Media are sterilized by autoclaving at 121 C for 15 minutes, unless stated otherwise. Formulae for extracts and additives (when complex) are given separately.

Acer twig

sliced twig of 7 or 8 cm long
water per tube 6 ml

Sterilize 60 minutes at 120 C (1 atm).

ARCH (Archimycetes agar)

peptone 2 g
malt extract 3 g
glucose 5 g
agar 8 g
water 1 l

BAF (biotin-aneurin-folic acid agar)

glucose 30.0 g
peptone 2.0 g
yeast extract (Difco) 0.2 g
KH₂PO₄ 0.5 g
MgSO₄·7H₂O 0.5 g
FeCl₃·6H₂O 10.0 mg
ZnSO₄·7H₂O 1.0 mg
MnSO₄·4H₂O 5.0 mg
CaCl₂ 100.0 mg
thiamin HCl 0.05 mg
biotin 0.001 mg
folic acid 0.1 mg
inositol 50 mg
water 1 l
agar 15 g

Dissolve all ingredients in 0.6 l water at 60 C; dissolve agar in 0.3 l boiling water; cool down and mix; adjust to 1 l. pH = 5.8-6.3. Sterilize 20 minutes at 110 C (0.5 atm).

Barnes (Barnes agar)

K₃PO₄ 1 g
NH₄NO₃ 1 g
KNO₃ 1 g
glucose 1 g
agar 25 g
water 1 l

pH = 6.9.

BHI (brain-heart infusion agar)

Difco 0418

Carrot potato extract

scraped carrots 40 g
peeled potatoes 40 g
water 1 l

Grind carrots in blender, cut potatoes in small pieces, boil separately for 5 minutes, filter through cloth. Sterilize 60 minutes at 120 C (1 atm).

CHA (cherry decoction agar)

cherry extract 0.2 l
water 0.8 l
agar 15 g

Sterilize water and agar, add cherry extract and mix well, fill tubes with sterile material and resterilize filled tubes for 5 minutes at 102 C (0.1 atm).

CHAHM (cherry decoction agar with horse manure extract)

cherry extract 0.1 l
water 0.4 l
horse manure extract 0.5 l
agar 20 g

Use sterile tubes. Sterilize 5 minutes at 102 C

Cherry extract

cherries (without stone and stem) 1 kg
water 1 l

Bring to the boil and simmer for 2 hours, filter and fill bottles of 0.6 and 0.2 l. Sterilize 30 minutes at 110 C (0.5 atm).

CLA (carnation leaf agar)

CMA (cornmeal agar)

cornmeal extract 1 l
agar 15 g

Dissolve sea salt separately in warm water before adding.

Cornmeal extract

ground maize grain 60 g
water 1 l

Wrap maize grain in cloth and hang in pan; bring to the boil and simmer for 1 hour; squeeze and filter through cloth. Sterilize 60 minutes at 120 C (1 atm).

CYNA (Cyniclomyces agar)

CZA (Czapek agar)

NaNO ₃	3.0	g
K ₂ HPO ₄	1.0	g
KCl	0.5	g
MgSO ₄ ·7H ₂ O	0.5	g
FeSO ₄ ·7H ₂ O	0.01	g
saccharose	30.0	g
agar	15.0	g
water	1	l

pH = 6.0-6.5

CZxS (Czapek agar with x% saccharose)

NaNO ₃	3.0	g
K ₂ HPO ₄	1.0	g
KCl	0.5	g
MgSO ₄ ·7H ₂ O	0.5	g
FeSO ₄ ·7H ₂ O	0.01	g
saccharose	10x	g
agar	15.0	g
water	1	l

Example: CZ50S contains 500 g saccharose. pH = 6.0-6.5.

CZYA (Czapek-yeast agar)

NaNO ₃	3.0	g
K ₂ HPO ₄	1.0	g
KCl	0.5	g
MgSO ₄ ·7H ₂ O	0.5	g
FeSO ₄ ·7H ₂ O	0.01	g
yeast extract (Difco)	5.0	g
sucrose	30.0	g
agar	15.0	g
water	1	l
ZnSO ₄ ·7H ₂ O	0.01	g
CuSO ₄ ·5H ₂ O	0.005	g

pH = 6.0-6.5

GPYA (glucose-peptone-yeast extract agar)

glucose	40	g
peptone	5	g
yeast extract	5	g
agar	15	g
water	1	l

Sterilize 15 minutes at 110 C (0.5 atm).

GYPA (glucose-yeast-peptone agar)

glucose	20	g
peptone	10	g
yeast extract	5	g
agar	15	g
water	1	l

Sterilize 10 minutes at 110 (0.5 atm).

Hay (hay-infusion agar)

hay extract	1	l
agar	15	g

Hay extract

hay with weeds	50	g
water	1	l

Filter, adjust to 1 l, adjust pH to 6.2 with K₂HPO₄ or KH₂PO₄. Sterilize 30 minutes at 120 C (1 atm).

Horse manure extract

horse manure	2	l
water	4	l

Bring to the boil and simmer for 2 hours, filter through cloth. Sterilize 60 minutes at 120 C (1 atm).

LNA (Leeming & Notman agar)

bacteriological peptone	10	g
glucose	5	g
yeast extract	0.1	g
Ox bile, desiccated	8	g
glycerol	1	mg
glycerol monostearate	0.5	g
tween 60	0.5	mg
cow's milk (whole fat)	10	ml
agar	12	g
water	1	l

Sterilize 15 minutes at 110 C.

Lup (lupin stem)

lupin stem (7 or 8 cm long)		
water	6	ml

Sterilize 2 times for 60 minutes at 120 C (1 atm), 24 hours interval.

MA 2 (malt agar 2%)

malt extract	0.2	l
water	0.8	l
agar	15	g

Adjust pH to 7 with KOH.

MA 4 (malt agar 4%)

malt extract	0.4	l
water	0.6	l
agar	15	g

Adjust pH to 7 with KOH.

Malt extract

Dilute brewery malt with water to 10% sugar solution (level 10 on Brix saccharose meter).

Sterilize 20 minutes at 120 C (1 atm).

MAxG (malt agar with x% glucose)

malt extract	0.4	l
glucose	10x	g
water	0.6	l
agar	15	g

Example: MA40G contains 400 g glucose. pH = 7 with KOH.

MAxS (malt agar with x% saccharose)

malt extract	0.4	l
saccharose	10x	g
water	0.6	l
agar	15	g

Example: MA20S contains 200 g saccharose. pH = 7 with KOH.

MEA (malt extract agar)

Oxoid CM59

MMN (modified Melin-Norkrans medium)

malt extract (Oxoid L 39)	3	g
glucose	10	g
(NH ₄) ₂ HPO ₄	0.25	g
KH ₂ PO ₄	0.5	g
MgSO ₄ ·7H ₂ O	0.15	g
CaCl ₂ ·2H ₂ O	0.067	g
FeCl ₃ (1% solution)	1.2	ml
NaCl	0.025	g
thiamine.HCl	0.1	mg
agar (technical, Oxoid No. 3)	15	g

Adjust to pH= 5.6 with 1 N HCl. Sterilize 20 minutes at 110 C.

Modess (Modess agar)

KH ₂ PO ₄	0.5	g
MgSO ₄ ·7H ₂ O	0.5	g
NH ₄ Cl	0.5	g
FeCl ₃ (1% solution)	10	drops
glucose	5.0	g
malt extract (Oxoid)	5.0	g
water	1.0	l
agar	20.0	g

Adjust to pH= 5.7 with HCl. Sterilize 30 minutes at 110 C (0.5 atm).

MYA (malt-yeast agar)

yeast extract (Difco)	3	g
malt extract	3	g
glucose	10	g
Bactopeptone	5	g
water	1	l
agar	15	g

MYA50G (malt-yeast agar with 50% glucose)**NUT (nutrient agar)**

peptone	5	g
beefextract	5	g
NaCl	5	g
agar	15	g
water	1	l

pH = 7.2-7.4

OA (oatmeal agar)

oatmeal extract	1	l
agar	15	g

Sterilize acidified OA for 5 minutes at 102 C (0.1 atm).

OAHM (oatmeal agar with horse manure extract)

horse manure extract	0.33	l
oatmeal extract	0.66	l
agar	15	g

Oatmeal extract

oatmeal	30	g
water	1	l

Wrap oatmeal flakes in cloth and hang in pan; bring to the boil and simmer for 2 hours; squeeze and filter through cloth. Sterilize 60 minutes at 120 C (1 atm).

PCA (potato-carrot agar)

carrot potato extract	0.5	l
water	0.5	l
agar	15	g

PDA (potato-dextrose agar)

potato extract	0.23	l
dextrose	20	g
agar	15	g
water	0.77	l

pH = 6.6.

PEGS (peptone-glucose-saccharose)

peptone	10	g
K ₂ HPO ₄	1	g
MgSO ₄ ·7H ₂ O	0.5	g
Ca(NO ₃) ₂	1	g
glucose	20	g
saccharose	10	g
water	1	l

Sterilize 30 minutes at 110 C (0.5 atm).

PEP x% (peptone agar x%)

peptone	10x	g
water	1	l
agar	15	g

Example: PEP 3% contains 30 g peptone.

PGLY (potato-glycerin agar)

Fill tubes with 1 piece of cotton wool and 1 piece of potato; wet with 5% glycerin solution. pH = 6. Sterilize 60 minutes at 120 C (1 atm).

Picea twig

sliced twig of 7 or 8 cm long		
water per tube	6	ml

Pinus twig

sliced twig of 7 or 8 cm long
 water per tube 6 ml

Potato extract

Wash and grind 5 kg potatoes (peeled and sliced) in mincer; use 300 ml water for 100 g potatoes; after one night at 4 C filter through cloth. pH = 6.6. Sterilize 60 minutes at 120 C.

PYE (phytone-yeast extract agar)

Phytone yeast extract agar (BBL) 72 g
 water 1 l

Boil for 1 minute.

RDA (rabbit dung agar)

5 or 6 rabbit droppings
 a little water per tube

Place pre-sterilized rabbit pellets in each test tube; dispense 4 ml of a 1.5% agar solution in the tubes; sterilize and slant so that pellets extend above agar surface. Inoculate on pellets. Sterilize 3 following days for 60 minutes at 120 C (1 atm).

Rice (boiled rice)

rice extract 1 l
 agar 15 g

Rice extract

ground rice 200 g
 water 3 l

Sterilize 60 minutes at 120 C (1 atm).

SABG (Sabouraud glucose agar)

neo-pepton (Difco) 10 g
 glucose 20 g
 MgSO₄·7H₂O 1 g
 KH₂PO₄ 1 g
 agar (Difco) 20 g
 water 1 l

Dissolve warm, don't boil.

SABM (Sabouraud maltose agar)

neo-pepton (Difco) 10 g
 maltose 20 g
 MgSO₄·7H₂O 1 g
 KH₂PO₄ 1 g
 agar (Difco) 20 g
 water 1 l

Saleb

Dried tubers of Orchis muscula (early purple orchis) are soaked in boiling water, dried and ground.

SNA (synthetic nutrient-poor agar)

KH₂PO₄ 1 g
 KNO₃ 1 g
 MgSO₄·7H₂O 0.5 g
 KCl 0.5 g
 glucose 0.2 g
 saccharose 0.2 g
 Bacto agar (Difco) 20 g
 water 1 l

Soil extract

Sterilize 2 l garden soil with 2 l water for 1 hour at 120 C; allow to settle for 1 or 2 days, then filter through cloth. Sterilize 20 minutes at 120 C (1 atm).

V8 (V8-juice agar)

V8 (unfiltered) 0.2 l
 CaCO₃ 3 g
 agar 20 g
 water 0.8 l

Sterilize 15 minutes at 110 C (0.5 atm).

WA (water agar)

agar 20 g
 water 1 l

X (X-agar)

cherry extract 110 ml
 PEGS 600 ml
 oatmeal extract 600 ml
 water 480 ml
 agar 25 g

Mix all ingredients, except cherry extract, heat and stir until dissolved, stop heating, add cherry extract and mix well. Sterilize 30 minutes at 110 C (0.5 atm).

YMA (yeast-malt agar)

see MYA.

YPD (yeast-peptone-dextrose agar)

peptone 1 g
 yeast extract (Oxoid) 1 g
 glucose (Merck) 10 g
 sea salt 36 g
 agar (Bacto) 14 g
 water 1 l

YPSS (yeast powder-soluble starch agar)

K₂HPO₄ 1.0 g
 MgSO₄·7H₂O 0.5 g
 starch (soluble) 15.0 g
 yeast extract (Difco) 4.0 g
 agar 15.0 g
 water 1 l

Dissolve (boil) all ingredients without agar, add agar, adjust to 1 l.