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Version created by [Megan McDonald](#)

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**Protocol status:** In development  
We are still developing and optimizing this protocol

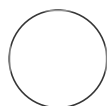
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## Complete Medium or Complete Medium Xylose (from Leach, Lang and Yoder 1982) V.2

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### ABSTRACT

For the growth and maintenance of *Cochliobolus carbonum* and *Cochliobolus victoriae*

## MATERIALS

### Trace Minerals

Boric Acid ( $\text{H}_3\text{BO}_3$ ) CAS: [10043-35-3](#)

Cupric Sulfate ( $\text{CuSO}_4$ ) CAS: [7758-98-7](#)

Potassium Iodide (KI) CAS: [7681-11-0](#)

Manganese (II) sulfate monohydrate  $\text{MnSO}_4 \cdot \text{H}_2\text{O}$  CAS: [10034-96-5](#)

Sodium permanganate monohydrate  $\text{NaMoO}_4 \cdot \text{H}_2\text{O}$  CAS: [79048-36-5](#)

Zinc sulfate heptahydrate  $\text{ZnSO}_4 \cdot 7 \text{H}_2\text{O}$  CAS: [7446-20-0](#)

Iron (III) chloride hexahydrate  $\text{FeCl}_3 \cdot 6\text{H}_2\text{O}$  CAS: [10025-77-1](#)

### Salts

Calcium nitrate tetrahydrate  $\text{Ca}(\text{NO}_3)_2 \cdot 4 \text{H}_2\text{O}$  CAS: [13477-34-4](#)

Potassium Phosphate monobasic  $\text{KH}_2\text{PO}_4$  CAS: [7778-77-0](#)

Magnesium Sulfate heptahydrate  $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$  CAS: [10034-99-8](#)

Sodium Chloride  $\text{NaCl}$  CAS: [7647-14-5](#)

### Media

Yeast Extract CAS: 8013-01-2 (some people report differences between difference sources)

**Casein Digests: Still a bit of work to do here to determine, which of these is best (including new plant-based sources). Big differences in prices between different digest types.**

Acid hydrolysed Casein CAS: [65072-00-6](#)

Peptone from casein, tryptic digest OR pancreatic digest (tryptone) CAS: [91079-40-2](#)

## Make Micronutrients Solution

- 1 9 mg  $\text{H}_3\text{BO}_3$   
58.5 mg  $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$   
1.95 mg KI (Potassium Iodine)  
9 mg  $\text{MnSO}_4$   
7.6 mg  $\text{NaMoO}_4$   
822 mg  $\text{ZnSO}_4 \cdot 6 \text{H}_2\text{O}$   
139.8 mg  $\text{FeCl}_3 \cdot 6\text{H}_2\text{O}$   
  
in 300 mL ddH<sub>2</sub>O and filter sterilise

**Citation:**

Heterokaryosis and Parasexuality in the Fungus Ascochyta Imperfecta Author(s): K. E. Sanderson and A. M. Srb Source: American Journal of Botany , Jan., 1965, Vol. 52, No. 1 (Jan., 1965), pp. 72-81 Published by: Wiley Stable URL: <https://www.jstor.org/stable/2439977>

## Make 100x Salt Solutions A and B

### 2 100X Salt Solution A

10g  $\text{Ca}(\text{NaO}_3)_2 \cdot 4 \text{H}_2\text{O}$

100 mL ddH<sub>2</sub>O

Autoclave

**Citation:**

Leach, J., Lang, B. R. & Yoder, O. C. *Microbiology* **128**, 1719-1729, [doi:https://doi.org/10.1099/00221287-128-8-1719](https://doi.org/10.1099/00221287-128-8-1719) (1982).

### 3 100X Salt Solution B

2 g  $\text{KH}_2\text{PO}_4 \cdot 7 \text{H}_2\text{O}$

1.5g NaCl

100 mL H<sub>2</sub>O

pH 5.3

Autoclave

**Citation:**

Leach, J., Lang, B. R. & Yoder, O. C. *Microbiology* **128**, 1719-1729, [doi:https://doi.org/10.1099/00221287-128-8-1719](https://doi.org/10.1099/00221287-128-8-1719) (1982).

## Make Complete Medium (CM) or Complete Medium Xylose (...)

### 4 Complete Medium Base

10 g glucose OR xylose (substitute glucose for xylose for CMX medium)

1 g Yeast Extract

0.5 g Acid-hydrolysed Casein

0.5 g Enzyme-hydrolysed casein

20g Agar

10 mL Salt A

10 mL Salt B

Make up to 1000 mL with ddH<sub>2</sub>O and Autoclave

After autoclaving add:

1 mL sterilised micronutrient solution

**Citation:**

Leach, J., Lang, B. R. & Yoder, O. C. *Microbiology* **128**, 1719-1729,  
[doi:https://doi.org/10.1099/00221287-128-8-1719](https://doi.org/10.1099/00221287-128-8-1719) (1982).

## Complete Medium for Sporulation

### 5 Complete Medium Base

0.5 g glucose OR xylose (substitute glucose for xylose for CMX medium)

20 g Sorbose

1 g Yeast Extract

0.5 g acid hydrolysed casein

0.5 g enzyme hydrolysed casein

20g Agar

10 mL Salt A

10 mL Salt B

Make up to 1000 mL with ddH<sub>2</sub>O and Autoclave

After autoclaving add:

1 mL sterilised micronutrient solution