

This medium is similar to Czapek's but contains more mineral 'micronutrients' as well as vitamins. It is a good medium for many moulds and allows sporulation in many species that will not sporulate on Czapek's. Because of the minute amounts of some ingredients, it is necessary to make a stock solution of these and add only a small portion of this to the medium. Such a solution is prepared by adding to 1 litre of water 1000 times the amount of each ingredient required in the medium. Later 1 ml of this solution can be added to 1 litre of water and the proper amount of it, as required in the formula, will be present. Again, to be truly 'synthetic,' the medium should be used without agar.

Semi-synthetic

1. Modified Leonian's Agar

Maltose	6.25 g 3.12 g	+ Glucose 3.12 g
Malt extract	6.25 g	
KH ₂ PO ₄	1.25 g	
Yeast extract	1.0 g	
MgSO ₄ · 7H ₂ O	0.625 g	
Peptone	0.625 g	
Agar	20 g	
Distilled water	1000 ml	

Leonian's medium was devised by the American mycologist L.H. Leonian, and was designed to promote sporulation in certain moulds. Later, at the University of Toronto, R.F. Cain found it to be more suitable for ascomycetes if it contained a little yeast extract; hence the term 'modified' in its name. It is a good general purpose medium that will yield good growth with most fungi. Certain fungi, such as many mycorrhizal forms, will not grow on Leonian's Agar because they are unable to use maltose as an energy source. For these fungi we use Modified Melin-Norkran's medium (Marx 1969), which has a glucose energy component.

2. Potato Dextrose Agar

Thinly sliced, peeled white potatoes	500 g
Glucose	20 g
Agar	15 g
Distilled water	1000 ml

Heat potatoes at 60°C for 1 hour and filter through cheesecloth. Make up volume to 1000 ml and add other ingredients. Cook 1 hour and then sterilize.

Potato Dextrose Agar, or PDA, as it is usually called, is an old formula that is used in plant pathology and for general laboratory use. It is a good all-purpose medium.

3. Sabouraud's Agar

Glucose	40 g
Peptone	10 g
Agar	15 g
Distilled water	1000 ml

This is the standard medium used in medical mycology. It is probably no better for these moulds than Leonian's or PDA but is simply the traditional choice and thus the medium that must be used if colonies are to be compared with those