Media Ingredients, Peptones and Hydrolysates

Agar, Bacteriological
Agar, Bacteriological is used as a solidifying agent in microbiological culture media where specifications include good clarity and relatively free of toxic inhibitors. Agar, Bacteriological was developed to address the needs of large scale commercial and industrial applications, where good quality is required at a competitive price. Agar, Bacteriological is useful in the biotech industry and clinical applications.

Agar, Purified
Agar, Purified is a solidifying agent that is essentially free of extraneous materials, salts, and pigments. It is suitable for use in immunodiffusion and electrophoretic studies, and as a gelling agent in mammalian tissue and plant tissue culture media. Agar, Purified should be used when increased purity and clarity is required.

Agar, Select
Agar, Select is used a solidifying agent in microbiological culture media. In Agar, Select, extraneous matter, pigmented portions, and salts have been reduced to a minimum. Agar, Select is often chosen in research where specifications are closely controlled and lot to lot specificity maintained. The clarity of Agar, Select in solutions and prepared in plates aids in colony identification. The gel strength is optimized at a concentration of 1.5%, permitting streaking but not tearing of plated media. Agar, Select is suitable for clinical applications.

Agar, Technical
Agar, Technical is used as a solidifying agent in microbiological culture media where specifications include good clarity and relatively free of toxic inhibitors. Agar, Technical is suitable for general bacteriological applications.

Beef Extract Powder
Beef Extract Powder is a replacement for infusion of meat, and is standard in composition and reaction. Beef Extract Powder provides nitrogen, vitamins, amino acids and carbon in microbiological culture media.

Bile Salts Mixture #3
Bile Salts Mixture #3 is used as a selective agent for the isolation of Gram-negative microorganisms, inhibiting Gram-positive cocci. Bile is derived from the liver. Bile Salts Mixture #3 contains bile extract standardized to provide inhibitory properties for selective media.

Brain-Heart Infusion Solids
Brain-Heart Infusion (BHI) Solids is composed of a dehydrated infusion of porcine brains and hearts for use in the preparation of culture media. BHI Solids provides nitrogen, amino acids, and vitamins in microbiological culture media. BHI Solids is processed from large volumes of raw material, retaining all the nutritive and growth stimulating properties of fresh tissues.

Casein, Acid Hydrolysate
Casein is a milk protein and a rich source of amino nitrogen. Casein, Acid Hydrolysate, a hydrochloric acid hydrolysate of casein, is added to media primarily because of the organic nitrogen and growth factor components. Casein, Acid Hydrolysate is recommended for use in microbiological cultures that require a completely hydrolyzed protein as a nitrogen source.

Dextrose
Dextrose is used in microbiological culture media as an energy source to increase the growth of bacteria and fungi. Dextrose is also used in the study of fermentation reactions of microorganisms, aiding in their identification. Dextrose is generally added at 0.5 to 1.0% concentration in fermentation media.

Dipeptone
Dipeptone is a blend of enzymatic digest of animal tissue and casein. Dipeptone contains many peptide sizes in combination with vitamins, nucleotides, minerals and other carbon sources. Dipeptone is particularly well suited in supplying the growth requirements of fastidious bacteria. This peptone is extremely valuable in media for cultivation of pathogenic fungi. Growth of these microorganisms is rapid and colony formation is uniform and typical.

Gelatin
Gelatin is a protein of uniform molecular constitution, and derived chiefly by the hydrolysis of collagen. Collagens are a class of albuminoids, found abundantly in bones, skin, tendon, cartilage and similar tissues of animals. Gelatin is used in culture media to determine protease production by bacteria, and as a nitrogen and amino acid source in culture media.

Hemoglobin Powder
Hemoglobin Powder is freeze-dried hemoglobin for use in preparing microbiological culture media. Hemoglobin Powder is used with GC Agar to provide an enriched medium for the isolation and cultivation of fastidious microorganisms. Hemoglobin Powder provides the hemin (X factor) required for growth of *Haemophilus*, and for enhanced growth of *Neisseria* spp.

Lactose
Lactose is used in microbiological culture media as an energy source to increase the growth of bacteria and fungi. Lactose is also used in the study of fermentation reactions of microorganisms, aiding in their identification. Lactose is generally added at a 0.5 to 1.0% concentration in fermentation media.

Malt Extract
Malt Extract is obtained from barley, and designed for the propagation of yeasts and molds. Malt Extract is well suited for yeasts and molds due to a high concentration of carbohydrates, particularly maltose. This product is generally employed in concentrations of 1 - 10%, and provides carbon, protein and other nutrients.

Oxbile (Oxgall)
Oxbile is manufactured from large quantities of fresh bile by rapid evaporation of the water content. Bile is composed of fatty acids, bile acids, inorganic salts, sulfates, bile pigments, cholesterol, mucin, lecithin, glycuronic acids, porphyrins and urea. The use of Oxbile insures a regular supply of bile, and assures a degree of uniformity impossible to obtain with fresh materials. It is prepared for use in selective media for differentiating groups of bile-tolerant bacteria. Oxbile is used as a selective agent for the isolation of Gram-negative microorganisms, inhibiting Gram-positive bacteria. The major composition of Oxbile is taurocholic and glycocholic acids.

Pancreatic Digest of Casein (Peptone C)
Pancreatic Digest of Casein is recommended for preparing media where an enzymatic hydrolyzed casein is desired. Casein is a rich source of amino acid nitrogen. This product is used to support the growth of fastidious microorganisms, and has a high tryptophan content.

Pancreatic Digest of Gelatin (Peptone G)
Pancreatic Digest of Gelatin is deficient in carbohydrates. Pancreatic Digest of Gelatin is used as a media ingredient for fermentation studies, and alone to support the growth of non-fastidious microorganisms.

Papaic Digest of Soybean Meal (Peptone S)
Papaic Digest of Soybean Meal is a nitrogen source, and contains the naturally occurring high concentrations of vitamins and carbohydrates of soybean. Papaic Digest of Soybean Meal minimizes bovine spongiform encephalopathy (BSE) risk in vaccine production because the origin of this product is plant.

Peptic Digest of Animal Tissue (Peptone A)
Peptic Digest of Animal Tissue provides nitrogen, amino acids, vitamins and carbon in microbiological culture.

Peptone S, Ultrafiltered
Peptone S, Ultrafiltered is a papaic digest of soybean meal prepared under controlled conditions for use in microbiological procedures. The nitrogen source in Peptone S, Ultrafiltered contains naturally occurring, high concentrations of vitamins and carbohydrates of soybean.

Skim Milk
Skim Milk is soluble, spray-dried skim milk. This product is used as a complete medium or incorporated into other media for the isolation and cultivation of microorganisms found in milk products. Skim Milk is also used for differentiating organisms based on coagulation and proteolysis of casein.

Tryptone
Tryptone is an enzymatic digest of casein used as a nitrogen source in culture media. Casein is the main protein of milk, and a rich source of amino-acid nitrogen. Tryptone is rich in tryptophan, making it valuable for use in detecting indole production. The absence of detectable levels of carbohydrates in Tryptone makes it a suitable peptone in differentiating bacteria on the basis of their ability to ferment various carbohydrates.

Yeast Extract
Yeast Extract is the water soluble portion of autolyzed yeast containing vitamin B complex. Yeast Extract is an excellent stimulator of bacterial growth and used in culture media. The autolysis is carefully controlled to preserve the naturally occurring B-complex vitamins. Yeast Extract is generally employed in concentrations of 0.3 - 0.5%. Yeast Extract also provides vitamins, nitrogen, amino acids and carbon in microbiological culture media.

Yeast Extract, Ultrafiltered
Yeast Extract, Ultrafiltered provides vitamins, nitrogen, amino acids, and carbon in microbiological and cell culture media. Yeast Extract, Ultrafiltered has been ultrafiltered through a 10,000 dalton molecular weight cut off filter to improve filterability and to significantly reduce endotoxin levels.

Yeastolate
Yeastolate provides nitrogen, vitamins, carbon, and trace elements in microbiological culture media. Endotoxin levels have been reduced to improve growth and minimize toxicity in cell culture applications. Yeastolate is also an excellent source of Vitamin B complex.