

MEDIA INGREDIENTS, PEPTONES & 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, 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 No. 3

Bile Salts Mixture No. 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 No. 3 contains bile extract standardized to provide inhibitory properties for selective media.

Brain-Heart Infusion Solids (BHI)

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.

Casein Digest Peptone

Casein Digest Peptone, an enzymatic digest of casein, was developed for use in molecular genetic media. Casein Digest Peptone is a rich source of nitrogen, vitamins, and amino acids used in microbiological culture media. Casein Digest Peptone is derived from casein, a raw milk protein, and contains a high tryptophan content. Casein Digest Peptone is used as the nitrogen source in the formulas of NZ media.

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.

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.

Lactalbumin Hydrolysate

Lactalbumin Hydrolysate is an enzymatic digest of lactalbumin for use in preparing microbiological culture media. It may be used as an ingredient in tissue culture media, fermentation media, media for the growth of lactobacilli and in media for the growth of *Campylobacter* spp. It also provides nitrogen, amino acids, vitamins, and carbon in microbiological culture 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.

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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 C1)

Pancreatic Digest of Casein is enzymatically hydrolyzed casein that provides a complex nitrogen source in microbiological culture media. 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 Casein 2 (Peptone C2)

Enzymatic digest of casein is used for preparing microbiological culture media. Pancreatic Digest of Casein 2 is used to support the growth of fastidious microorganisms, and supplies an excellent balance of di- and tri-peptides along with free amino acids.

Pancreatic Digest of Gelatin (Peptone G)

Pancreatic Digest of Gelatin is deficient in carbohydrates and is used for preparing microbiological culture media for fermentation studies. It is also used alone to support the growth of non-fastidious microorganisms.

Pancreatic Digest of Soybean Meal (Peptone S1)

A highly digested hydrolysate of soybean meal prepared under controlled conditions for use in culture media. The nitrogen source in Peptone S1 contains naturally occurring, high concentrations of vitamins and carbohydrates of soybean, and is used in fermentation broths. Pancreatic Digest of Soybean Meal minimizes bovine spongiform encephalopathy (BSE) risk in vaccine production because of the plant origin of this product.

Papaic Digest of Soybean Meal (Peptone S2)

Enzymatic Digest of Soybean Meal used in preparing microbiological culture media. The nitrogen source in Peptone S2 contains naturally occurring, high concentrations of vitamins and carbohydrates. Papaic Digest of Soybean Meal is guaranteed to be free of any animal origin ingredients.

Peptic Digest of Animal Tissue (Peptone A)

Peptic Digest of Animal Tissue is an enzymatic digest of animal tissue used in preparing microbiological culture media. Peptic Digest of Animal Tissue was developed as an alternate nitrogen source to accommodate varying nutritional requirements. 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.

Tryptose

Tryptose is a mixed enzymatic hydrolysate with rich nutritional value for microbiological culture media. The enzymatic hydrolysis of this peptone permits the preservation of vitamins and amino acids. Tryptose is recommended in broth and agar formulations, and when used in formulations containing blood permits hemolytic reactions. Tryptose was originally developed as a growth stimulant for *Brucella* spp.

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.