Accumix

Dehydrated Culture Media ■ Bases ■ Supplements

Bases & Supplement

"Knowledge is a collection of facts.
Wisdom is how to apply it."

Media Bases

Culture media bases or raw materials are the basic ingredients of any culture media. These are manufactured within Microxpress adhering to specified quality performance standards. The different kinds of bases (peptones and extracts) available reflect the differing demands of microorganisms for amino acids, peptides and other nutrients which are the basic constituents of proteins.

Peptones are derived from different sources to suit various nutritional requirements using various proteolytic enzymes and manufacturing methods. Peptones are hydrolyzed tissues, which are supplied as spray dried powders and are very nutritious and clearly soluble in water.

The media bases or raw materials are provided for users who wish to create their own media or who wish to supplement the existing formulae. The use of these products will, however, not necessarily reproduce the performance of the listed Accumix culture media, even if used in identical formulae. This is because it is impossible to produce peptones or hydrolysates, which can be universally applied to any formulae.

STORAGE - All Media Bases are to be stored at Room Temperature (RT) below 30°C.

Agar Powder AB001

Use

Agar is used as a solidifying agent in microbiological culture media.

Summary

Agar Powder is specifically produced and specially processed for use in bacteriological culture media, where clarity and compatibility are not of prime importance. Extraneous matter, impurities, debris, salts and pigments are reduced to specified levels during manufacture. It is a technical grade powder with high mineral / metal content and is advantageous for use in certain culture media. Agar is typically used in a final concentration of 1-2% for solidifying culture media.

Principle

Agar Powder is suitable for many bacteriological applications. It is not highly processed and has broader technical specifications than most other agars.

Colour and Appearance

Cream coloured powder, which only swells in cold water but solubility is facilitated by soaking the powder in cold water before dissolving in boiling water.

Directions for preparation

Refer to the final concentration of Agar Powder in the formula of the medium being prepared.

Applications

Agar Powder is used in culture media generally in the following concentrations

Routine media	1.4 to 1.6%
Semi- solid media	0.15%
Media with reduced oxygen tension	0.05-0.1%
Extra hard gels (to inhibit swarming of Proteus)	3.0%

Agar Agar; Extra Pure AB0011

Use

Agar Agar; Extra Pure is used as a bacteriological and tissue culture work.

Summary

Agar Agar; Extra Pure is extensively purified by exhaustively extracting Agar with water and organic solvents to remove all nitrogenous compounds, inorganic salts and vitamins. It has a low calcium and magnesium levels and is compatible with all culture media. It is recommended for bacteriological and tissue culture work.

Principle

Agar Agar; Extra Pure is suitable for microbiological culture media as well as for tissue cultures.

Colour and Appearance

Cream coloured powder soluble in water, forms a clear solution.

Directions for preparation

Refer to the final concentration of Agar Agar;Extra Pure in the formula of the medium being prepared.

Applications

Agar Agar; Extra Pure is recommended for use in media employed for nutritional studies, tissue culture procedures etc. Due to low gelling temperature, it is conveniently used in Blood and Serum Agar.

The performance standards of the above medium conform to the NCCLS standards of quality assurance for commercially prepared microbiological culture media.

Agar Agar; Type I — AB0012

Agar Agar; Type II — AB0013

Agar Agar; Type III — AB0014

Use

Agar Agar Type I, II and III are recommended for tissue culture work.

Summary

Agar Agar Type I, II and III are carefully manufactured and purified with utmost care. This Agar Agar is recommended for use in tissue culture work, where high purity and good diffusion of substance is essential.

Principle

Agar Agar; is suitable for tissue culture work. It is essentially free from impurities.

Colour and Appearance

Cream coloured powder soluble in water, forms a clear solution.

Directions for preparation

Refer to the final concentration of Agar Agar in the formula of the medium being prepared.

Applications

Agar Agar is the mainly recommended for tissue culture work. It has been used as a high performance stabilizing, thickening and gelling agent. Its ability to produce clear, colourless, odourless and natural gel.

The performance standards of the above medium conform to the NCCLS standards of quality assurance for commercially prepared microbiological culture media.

Beef Extract Powder — AB002

Use

Beef Extract Powder is used in the preparation of a variety of culture media for the cultivation of a wide variety of microorganisms.

Summary

Beef Extract Powder is a meat extract obtained from specially selected fresh lean beef dried to powder form and provides an undefined source of nutrients. Beef extract is not exposed to the harsh treatment used for protein hydrolysis, so it can provide some of the nutrients lost during peptone manufacture. It is standard in its composition and reaction.

Beef extract is intended to replace aqueous infusion of meat in culture media and is frequently used at a concentration of 0.3 to 1.0%, although concentrations may vary depending on the nutritional requirements for the medium formulation. It is used in media for biochemical studies, particularly fermentation reactions, being free from fermentable substances that would interfere with the accuracy of such determinations.

Principle

Beef Extract is a mixture of peptides, amino acids, organic acids, nucleotide fractions, minerals and some vitamins. It complements the nutritive properties of peptone by contributing minerals, phosphates, vitamins, energy sources and other essential growth factors that may be absent in peptone.

Colour and Appearance

Light yellow coloured, free flowing powder, freely dissolves in distilled water to form a yellowish brown coloured solution, which remains clear on autoclaving.

Directions for preparation

Refer to the final concentration of Beef Extract Powder in the formula of the medium being prepared.

Applications

Beef Extract is used in general purpose media like Nutrient Agar and Broth, diagnostic media like CLED Agar and in large-scale production of antibiotics and enzymes. It is also an ingredient in Antibiotic Assay Media described in the USP and several other media recommended for standard methods application.

Brain Heart Infusion Powder — AB003

Use

Brain Heart Infusion Powder is used in the preparation of a variety of culture media for the cultivation of fastidious microorganisms.

Summary

Brain Heart Infusion Powder is a mixture of calf brain infusion and beef heart infusion. Each 17.5 grams of the powder contains infusions from 200 grams calf brain and 250 grams beef heart.

Principle

Infusions of brain and heart tissue supply protein and other nutrients necessary to support the growth of fastidious and nonfastidious microorganisms.

Colour and Appearance

Yellowish brown coloured, free flowing powder having characteristic but not putrescent odour. It readily dissolves in water forming beige coloured, crystalline clear solution.

Directions for preparation

Refer to the final concentration of Brain Heart Infusion Powder in the formula of the medium being prepared.

Applications

Brain Heart Infusion Powder is highly nutritious and is employed in media like Brain Heart Infusion Agar and Broth for cultivation of highly fastidious organisms. It supports good growth of staphylococci, streptococci, *Haemophilus, Neisseria* and pathogenic fungi.

Casein Enzymic Hydrolysate (Tryptone) AB004

Use

Casein Enzymic Hydrolysate (Tryptone) is used in the preparation of a variety of culture media such as sterility testing media, diagnostic media and media for biochemical characterization.

Summary

Casein Enzymic Hydrolysate (Tryptone) is the pancreatic digest of milk protein casein (Tryptone) that is rich in trytophan, which is used by a wide variety of microorganisms. It can be used in any formulation where a pancreatic or tryptic digest of casein is specified. Enzymatic digest of casein is preferred over acidic digest wherein the casein is not broken down as completely into its constituent components. This makes for a more nutritious hydrolysate, especially for those organisms that prefer peptides to amino acids. It is free from detectable levels of carbohydrate and is included in standard methods applications. The European Pharmacopoeia lists it as a component in many of the recommended media. Casein Enzymic Hydrolysate works well in fermentation applications (being biologically free of carbohydrates) and has been used successfully with common organisms such as *E.coli*. Casein Enzymic Hydrolysate can detect 'flatsour' or 'sulphide' spoilage organisms in the canning industry.

Principle

Casein is the main milk protein and a rich source of amino acid nitrogen.

Colour and Appearance

Cream coloured powder, freely dissolves in distilled water forming a light yellow coloured aqueous solution that remains clear after autoclaving.

Directions for preparation

Refer to the final concentration of Casein Enzymic Hydrolysate in the formula of the medium being prepared.

Applications

Casein Enzymic Hydrolysate (Tryptone) is used in media such as Tryptone Water for testing indole production, Soyabean Casein Digest Agar and Broth which are general purpose media, Fluid Thioglycollate Medium for sterility testing and in MacConkey Agar which is a diagnostic medium.

Casein Peptone (Enzymic Digest of Casein) AB0041

Use

Casein Peptone (Enzymic Digest of Casein) is used in the preparation of a variety of culture media such as sterility testing media, diagnostic media and media for biochemicalcharacterization.

Summary

Casein Peptone (Enzymic Digest of Casein) is the pancreatic digest of milk protein casein that is rich in trytophan, which is used by a wide variety of microorganisms. It can be used in any formulation where a pancreatic or tryptic digest of casein is specified. Enzymatic digest of casein is preferred over acidic digest wherein the casein is not broken down as completely into its constituent components. This makes for a more nutritious especially for those organisms that prefer peptides to amino acids. It is free from detectable levels of carbohydrate and is included in standard methods applications. The European Pharmacopoeia lists it as a component in many of the recommended media. Casein Peptone (Enzymic Digest of Casein) works well in fermentation applications (being biologically free of carbohydrates) and has been used successfully with common organisms such as *E.coli*. Casein Peptone (Enzymic Digest of Casein) can detect 'flatsour' or 'sulphide' spoilage organisms in the canning industry.

Principle

Casein Peptone is the main milk protein and a rich source of amino acid nitrogen.

Colour and Appearance

Cream coloured powder, freely dissolves in distilled water forming a light yellow coloured aqueous solution that remains clear after autoclaving.

Directions for preparation

Refer to the final concentration of Casein Peptone (Enzymic Digest of Casein) in the formula of the medium being prepared.

Applications

Casein Peptone (Enzymic Digest of Casein) is used in media such as Tryptone Water for testing indole production, Soyabean Casein Digest Agar and Broth which are general purpose media, Fluid Thioglycollate Medium for sterility testing and in MacConkey Agar which is a diagnostic medium. The performance standards of the above medium conform to the NCCLS standards of quality assurance for commercially prepared microbiological culture media.

Fish Peptone AB005

Use

Fish Peptone is used in culture media for the cultivation of a variety of bacteria and fungi.

Summary

Fish Peptone is a non-mammalian, non-animal peptone used as a nitrogen source in microbiological culture media. It is a non-bovine origin peptone to reduce Bovine Spongiform Encephalopathy (BSE) risk.

Principle

Fish Peptone contains nitrogen in a form that is readily available for bacterial metabolism.

Colour and appearance

Yellow coloured free flowing powder, readily dissolves in water forming a light yellow coloured aqueous solution.

Directions for preparation

Refer to the final concentration of Fish Peptone in the formula of the medium being prepared.

Applications

Fish Peptone is developed for pharmaceutical and vaccine production and can replace any peptone, depending on the organism and production application.

Gelatin Peptone AB0051

Use

Gelatin Peptone is used in culture media, especially for non-fastidious microorganisms. It is also used in fermentation studies.

Summary

Gelatin Peptone is a pancreatic digest of porcine skin. It is low in fermentable carbohydrates. When used alone as a basic nutrient, it is suitable for preparing media for organisms not particularly fastidious in their nutritional requirements.

Principle

Gelatin is extracted from collagen, which is the fibrous protein in bone, cartilage and connective tissue. Gelatin Peptone provides nitrogen, amino acids and vitamins in microbiological culture media.

Colour and Appearance

Light yellow coloured powder having characteristic but not putrescent odour, readily dissolves in water but insoluble in alcohol and ether. Aqueous solution is light yellow coloured that remains clear even after autoclaving.

Directions for preparation

Refer to the final concentration of Gelatin Peptone in the formula of the medium being prepared.

Applications

It is recommended for use in Antibiotic Assay Media yielding low but reliable and reproducible growth levels. It also proves useful in fermentation studies in Urea Agar Base, MacConkey Agars, Violet Red Bile Agar etc.

Gelwell AB0052

Use

Gelwell is Gellan Gum, used as a gelling agent in food products, cosmetics, tablets and capsules and in microbiological media especially in plant tissue culture.

Summary

Gellan gum is a high molecular weight polysaccharide, produced as a fermentation product by a pure culture of the microbe Sphingomonas elodea. Gellan gum consists of four linked monosaccharides including one molecule of rhamnose, one molecule of glucuronic acid and two molecule of glucose. Gellan gum is a water soluble, off-white powder. It forms gels when positively charged ions are added. Manipulating the addition of potassium, magnesium, calcium and sodium salts can control the thickness and texture of gellan gum in various products.

Principle

Gellan gum is suitable for microbiological culture media as well as for plant tissue cultures.

Colour and Appearance

Cream coloured powder soluble in water, forming a viscous solution.

Directions for preparation

Refer to the final concentration of Gellwell in the formula of the medium being prepared.

Applications

Gellan Gum is extremely effective at low use levels and forms solid gels at concentrations as low as 0.1% along with addition of potassium, magnesium, calcium and sodium salts at certain concentrations.

The performance standards of the above medium conform to the NCCLS standards of quality assurance for commercially prepared microbiological culture media.

Heart Infusion Powder AB006

Use

Heart Infusion Powder is used in the preparation of culture media for cultivation of fastidious microorganisms.

Summary

Heart infusion is a dehydrated infusion obtained from heart muscles under controlled conditions to meet the nutritional demands of more exacting bacteria and is recommended for preparing heart infusion media. It is processed from large volumes of raw material, retaining all the nutritive and growth stimulating properties of fresh tissue.

Principle

Heart Infusion Powder provides nitrogenous and carbonaceous compounds, sulphur, vitamins and other nutrients to allow the growth of fastidious organisms.

Colour and appearance

Brownish yellow coloured, free flowing powder, readily dissolves in distilled water. 1% aqueous solution is amber coloured which remains clear after autoclaving.

Directions for preparation

Refer to the final concentration of Heart Infusion Powder in the formula of the medium being prepared.

Applications

Heart Infusion Powder is used in media for cultivation of fastidious microorganisms like *Mycoplasma,* pneumococci, gonococci, meningococci, *Brucella* species, *Actinomycetes* and fungi. It is also used to prepare Blood Agar Base, media to test antibiotic sensitivity and in large-scale cultivation of microorganisms for the preparation of vaccines.

Liver Extract Powder AB007

Use

Liver Extract Powder is used in the preparation of culture media for cultivation of fastidious bacteria.

Summary

Liver Extract Powder is a dehydrated extract of fresh liver tissues, processed under controlled conditions to retain all nutritive values of liver. It is recommended for cultivation of fastidious anaerobic bacteria and a wide variety of pathogenic microorganisms. The nutritive factors of liver permit luxuriant growth of *Brucella* and other fastidious pathogens.

Principle

Liver Extract Powder provides amino acids, peptides and other nutrients to support the growth of fastidious organisms.

Colour and Appearance

Reddish brown coloured, homogeneous powder having a characteristic liver like taste and odour. It readily dissolves in distilled water to form a light brown coloured solution, which remains clear after autoclaving.

Directions for preparation

Refer to the final concentration of Liver Extract Powder in the formula of the medium being prepared.

Applications

Liver Extract Powder is incorporated in Fluid Thioglycollate Medium for the cultivation of fastidious anaerobic bacteria such as *Brucella* species and clostridia. It is also used in large-scale cultivation of microorganisms for the bulk production of vaccines, steroids, enzymes and other products.

Malt Extract Powder AB008

Use

Malt Extract Powder is used in the preparation of culture media for the cultivation of yeasts and moulds.

Summary

Malt Extract Powder is prepared from aqueous extract of sprouted malt grains and dried under controlled conditions at low temperature to preserve carbohydrates and nitrogenous substances naturally present. It is generally employed in concentrations of 1-10%.

Principle

Malt Extract Powder has a high carbohydrate content and provides sources of carbon, protein and other nutrients. It is ideal for the cultivation of fungi because of the high concentration of reduced sugars, especially the maltoses.

Colour and Appearance

Brownish yellow coloured, homogeneous powder. It readily dissolves in distilled water to give a yellow coloured, aqueous solution.

Directions for preparation

Refer to the final concentration of Malt Extract Powder in the formula of the medium being prepared.

Applications

Malt Extract Powder is used in media employed for the cultivation of fungi such as Malt Agar, Malt Extract Agar and Malt Extract Broth. Malt extract in the agar form is recommended for the detection and isolation of yeasts and moulds from dairy products and food. It is also used for carrying stock cultures.

Meat Extract Powder AB009

Use

Meat Extract Powder is used in the preparation of culture media for cultivation of a wide variety of fastidious microorganisms.

Summary

Meat Extract Powder is prepared from fresh lean meat under controlled conditions to maintain nutritive properties and to obtain maximum growth of fastidious organisms.

Principle

Meat Extract Powder provides amino acids, peptides and other nutrients.

Colour and Appearance

Yellowish brown coloured powder with a meat like odour and taste. It readily dissolves in distilled water forming a yellowish brown coloured solution, which remains clear on autoclaving.

Directions for preparation

Refer to the final concentration of Meat Extract Powder in the formula of the medium being prepared.

Applications

Meat Extract Powder is used in various laboratory media formulations for mass cultivation of organisms for various purposes. It is also employed in bulk production of antibiotics, enzymes and other products.

Mycological Peptone (Peptone M) AB010

Use

Mycological Peptone is used in the preparation of culture media for cultivation of yeasts and moulds.

Summary

Mycological Peptone is a mixture of animal and plant peptone. Being rich in nutrients, it allows luxuriant growth of yeasts and moulds. It does not mask the appearance of media containing dyes and indicators, and is compatible with other media components.

Principle

1.0% w/v solution of Mycological Peptone provides a broad spectrum of amino acids and other nutrients for mycelial growth and sporulation. It rapidly gives a luxuriant growth with typical morphology and pigmentation. Since it does not encourage bacterial growth because of its acidity, it can be incorporated in media for the isolation of pathogenic fungi from material heavily contaminated with bacteria.

Colour and Appearance

Light yellow coloured powder, readily dissolves in distilled water forming a light yellow coloured solution that remains clear after autoclaving.

Directions for preparation

Refer to the final concentration of Mycological Peptone in the formula of the medium being prepared.

Applications

It is used in the preparation of fungal media employed for isolation, cultivation and identification of saprophytic and dermatophytic fungi, using acid as well as non-acid techniques.

Pancreatic Digest of Casein AB0101

Use

Pancreatic Digest of Casein is used in the prepration of various types of microbiological culture media.

Summary

Pancreatic Digest of Casein is recommended for preparing media where an enzymatic hydrolyzed casein is esired. Pancreatic Digest of Casein supports the growth of fastidious microorganisms.

Principle

Pancreatic Digest of Casein provides nitrogen, vitamins, minerals and amino acids in prepared culture media. Casein is the main protein of milk, and a rich source of amino acid nitrogen.

Colour and Appearance

Cream coloured powder, freely dissolves in distilled water forming a light yellow coloured aqueous solution that remains clear after autoclaving.

Direction of Preparation

Refer to the final concentration of Pancreatic Digest of Casein in the formula of the medium being prepared.

Applications

Pancreatic Digest of Casein is in many microbiological culture media like Pseudomonas Agar for Fluorescein, Pseudomonas Agar for Pyocyanin, and many other culture media which help to grow the fastidious organisms.

The performance standards of the above medium conform to the NCCLS standards of quality assurance for commercially prepared microbiological culture media.

Peptone, Bacteriological AB011

Use

Peptone, Bacteriological is used in the preparation of culture media for the cultivation of a wide variety of bacteria and fungi.

Summary

Peptone, Bacteriological is prepared by enzymatic digestion of selected animal protein sources like fresh meat. Being rich in nutrients, it supports the growth of a wide variety of microorganisms. It is compatible with other media constituents and will not develop a precipitate in the media. The combination of pancreatic and papain enzymes ensures that these peptones contain a wide spectrum of polypeptides. Several media containing peptone are specified in standard methods for multiple applications.

Principle

Bacteriological Peptone contains nitrogen in a form that is readily available for bacterial metabolism. It has a high peptide and amino acid content, with only a negligible quantity of proteoses and more complex nitrogenous constituents.

Colour and Appearance

Yellow coloured powder, readily dissolves in water forming yellowish brown coloured solution, which remains clear after autoclaving.

Directions for preparation

Refer to the final concentration of Bacteriological Peptone in the formula of the medium being prepared.

Applications

Bacteriological Peptone is used in a wide variety of nutrient media, diagnostic media, general laboratory media and for large-scale production of enzymes, vaccines, antibiotics, steroids and other products.

Peptone Special AB012

Use

Peptone Special is used in the preparation of culture media for the cultivation of a wide variety of fastidious microorganisms.

Summary

Peptone Special is an enzymatic digest of animal tissue prepared under controlled conditions to allow maximum growth of fastidious microorganisms.

Principle

Peptone Special provides peptides and other nutrients to allow the growth of a wide variety of organisms. It contains a wide spectrum of peptide sizes together with minerals, vitamins, nucleotides and other carbon compounds.

Colour and Appearance

Yellowish brown coloured powder, having a characteristic odour. It readily dissolves in distilled water forming yellowish brown coloured solution that remains clear after autoclaving.

Directions for preparation

Refer to the final concentration of Peptone Special in the formula of the medium being prepared.

Applications

Peptone Special is used in media where a wide range of fastidious organisms are to be cultured such as Columbia Blood Agar Base used for the cultivation of staphylococci and streptococci. It is also used in the large scale cultivation of other bacteria.

Peptonized Milk AB0121

Use

Peptonized Milk is used in the preparation of culture media suitable for the cultivation of lactobacilli, yeasts and moulds.

Summary

Peptonized Milk is a refined enzymatic digest of milk solids. It contains peptones, polypeptides and amino acids derived from milk protein as well as other nutritive components of skim milk.

Principle

Peptonized Milk contains lactose as the energy source.

Colour and Appearance

Light tan, free-flowing powder readily soluble in water.

Directions for preparation

Refer to the final concentration of Peptonized Milk in the formula of the medium being prepared.

Applications

It is primarily used in culture media employed for growth and isolation of lactobacilli and yeasts and moulds in dairy products.

Proteose Peptone AB013

Use

Proteose Peptone is used in the preparation of culture media employed for the cultivation of a wide variety of microorganisms and in producing bacterial toxins.

Summary

Proteose Peptone is prepared from peptic digest of animal tissues, by carefully controlling the digestion parameters. Media incorporating this peptone are suitable for the cultivation of different bacteria with a wide range of nutritional requirements. Proteose peptone was originally developed to produce a diphtheria toxin of high and uniform potency from cultures of *C.diphtheriae*. It is also valuable in the production of other bacterial toxins like *C.botulinum* toxin, *C.perfringens toxin*, toxin of haemolytic streptococci and *Salmonella pullorum*. Stock cultures are well preserved on media containing proteose peptone.

Principle

Proteose Peptone is rich in proteoses, peptones and free amino acids and can successfully replace meat infusion-peptone combinations. It provides nitrogen in a form that is readily available for bacterial growth. Many factors account for the suitability of Proteose Peptone for the culture of fastidious pathogens, including the nitrogen components, buffering range and the high content of proteoses, which create an environment beneficial to the maintenance of virulence and the elaboration of bacterial byproducts.

Colour and Appearance

Light coloured powder, readily dissolves in water forming light yellow coloured solution.

Directions for preparation

Refer to the final concentration of Proteose Peptone in the formula of the medium being prepared.

Applications

Proteose Peptone is used in media to support good growth of a large number of microorganisms including staphylococci, streptococci, pneumococci, meningococci, gonococci, *Neisseria, Haemophilus, Pasteurella, Corynebacterium* and *Histoplasma* species. It is especially suitable in media for production of *Corynebacterium diphtheria* toxin as well as in media for the production of toxins from Staphylococci, *Clostridia* and *Salmonella*. It is also used in media employed for bulk production of antibiotics, enzymes, veterinary preparations and manufacture of pertussis and measles vaccine.

Soya Peptone AB014

Use

Soya Peptone is used in the preparation of culture media for the cultivation of many fastidious microorganisms, including fungi.

Summary

Soya Peptone is obtained by the papaic hydrolysis of soya flour and complies with the USP specification. It is recommended in media that are required to support a shorter lag phase and smaller generation time to allow rapid luxuriant growth.

Soya Peptone is also recommended as a growth stimulant for the cultivation of difficult and fastidious organisms because of its growth stimulatory properties and is considered a non-animal product. Soy based peptones are used when it is necessary to eliminate all animal derived components. Soya peptone is specified in various standard methods for multiple applications.

Principle

In addition to its nitrogen content, it has a high carbohydrate content and is suitable for many purposes. The presence of sugars raffinose, sucrose and various other reducing sugars may be of importance in certain applications. However, high carbohydrate content makes it unsuitable for use in media intended for diagnostic work involving specific sugars and fermentable carbohydrates.

Colour and Appearance

Light yellow coloured powder, readily soluble in distilled water forming a light yellow coloured solution.

Directions for preparation

Refer to the final concentration of Soya Peptone in the formula of the medium being prepared.

Applications

Soya Peptone is used in Fluid Thioglycollate Medium for cultivation of anaerobic bacteria, in Soyabean Casein Digest Medium for cultivation of a wide variety of microorganisms, and in fungal media for cultivation of fungi.

Tryptose AB015

Use

Tryptose is used in the preparation of culture media for the cultivation of many fastidious microorganisms.

Summary

Tryptose is a mixture of enzymatic digest of protein designed to promote luxuriant growth of highly fastidious microorganisms. The digestive process of Tryptose results in assorted peptides of higher molecular weight suitable for long chain amino acid requirements. Tryptose was developed while studying the growth requirements of *Brucella*. It is very useful for cultivation of streptococci, pneumococci, meningococci and other fastidious micriorganisms. Huddleson found Tryptose to be equal or superior to meat infusion, providing uniformity for the cultivation and differentiation of fastidious organisms and can be successfully employed in place of meat infusion.

Principle

Tryptose provide sources of carbon, nitrogen, amino acids and vitamins required for bacterial growth.

Colour and Appearance

Light yellow coloured powder that forms a crystal clear aqueous solution in distilled water.

Directions for preparation

Refer to the final concentration of Tryptose in the formula of the medium being prepared.

Applications

Tryptose is used in the preparation of Blood Agar. The haemolytic reactions of bacteria can be easily demonstrated on Blood Agar containing tryptose because the blood cells are maintained in an excellent condition. It is also used in media employed for vaccine preparation wherein rapid and luxuriant growth is desired for large scale manufacturing of vaccines.

Veg Peptone AB0151

Use

Veg Peptone is used in the preparation of a variety of culture media for the cultivation of microorganisms.

Summary

Veg Peptone is an enzymic hydrolysate of vegetable proteins containing a mixture of peptides and amino acids that gives comparable growth promoting properties as that of animal origin peptone. This highly nutritious alternative to conventional culture media ingredients is ideal for use in fermentations and other pharma processes where animal based peptones are to be avoided.

Principle

Veg Peptone is formulated to provide a good nutritional base allowing growth of even fastidious organisms. Despite meticulous precautions, concerns remain that use of meat based peptones could lead to contamination with prions responsible for Bovine Spongiform Encephalopathy and other Transmissible pongiform Encephalopathies. Manufactured entirely from vegetable protein and containing no material of animal origin, Veg Peptone reduces this risk.

Colour and Appearance

Frozen dew coloured, homogeneous free flowing powder having characteristic

colour of protein. It freely dissolves in water; a 1% aqueous solution remains clear without haziness even after autoclaving.

Directions for Preparation

Refer to the final concentration of Veg Peptone in the formula of the medium being prepared.

Applications

Veg Peptone is recommended for use as a culture media ingredient in a variety of media as well as for commercial production of enzymes, antibiotics, vaccines and other products. It can be used to replace animal origin peptone in all culture media.

Xtrapep AB0152

Use

Xtrapep is used in the preparation of culture media for the cultivation of many fastidious microorganisms, including fungi.

Summary

Xtrapep is recommended in media that are required to support a shorter lag phase and smaller generation time to allow rapid luxuriant growth. Xtrapep is also recommended as a growth stimulant for the cultivation of difficult and fastidious organisms because of its growth stimulatory properties and is considered a non-animal product. Xtrapep is used when it is necessary to eliminate all animal derived components. Xtrapep is specified in various standard methods for multiple applications.

Principle

In addition to its nitrogen content, it has a high carbohydrate content and is suitable for many purposes. The presence of sugars raffinose, sucrose and various other reducing sugars may be of importance in certain applications. However, high carbohydrate content makes it unsuitable for use in media intended for diagnostic work involving specific sugars and fermentable carbohydrates.

Colour and Appearance

Light yellow coloured powder, readily soluble in distilled water forming a light yellow coloured solution.

Directions for preparation

Refer to the final concentration of Xtrapep in the formula of the medium being prepared.

Applications

Xtrapep is used in fungal media for cultivation of fungi as well as bacteria.

The performance standards of the above medium conform to the NCCLS standards of quality assurance for commercially prepared microbiological cu lture media.

Yeast Extract Powder AB016

Use

Yeast Extract Powder is used in the preparation of culture media for the cultivation of a wide variety of microorganisms.

Summary

Yeast Extract Powder is prepared by drying the extract obtained from yeast cells (*Saccromyces*) specially grown for this purpose. It is manufactured under controlled conditions to preserve the naturally occurring B complex vitamins and free amino acids. Its addition to many media or fermentation broths increases the yield of organisms and is recommended where rapid and luxuriant growth is required. It is considered a non-animal product. Yeast based peptones are used when it is necessary to eliminate all animal derived components. Media formulations containing yeast extract are specified in standard methods for various applications.

Principle

Yeast Extract Powder is a rich source of amino nitrogen. It provides vitamins, nitrogen, amino acids and carbon required for bacterial growth.

Colour and Appearance

Brownish yellow coloured, homogeneous, free flowing powder, readily dissolves in water forming yellowish brown coloured solution that remains clear after autoclaving.

Directions for preparation

Refer to the final concentration of Yeast Extract Powder in the formula of the medium being prepared.

Applications

Yeast Extract is rich in vitamins, especially those belonging to the B complex and is considered one of the most complete and versatile of the fermentation bionutrients available. In culture media, it is either used with beef extract or in place of beef extract. It has proved to be a valuable ingredient of media used for carrying stock cultures and for preparation of inocula of lactobacilli for microbiological assay of vitamins. It has been used effectively in culture media for study of bacteria in milk and other dairy products and is employed in the study of bacterial flora of commercially prepared infant foods, as well as in the study of organisms present in evaporated and condensed milk. Yeast extract is also used in media employed for antibiotic assay procedures.

VEG MEDIA BASES

Acc Veg Extarct BE (Beef Extract) ABV001

Use

Accu Veg Extract BE is used for preparation of a variety of culture media.

Summary

Accu Veg Extract BE is prepared under controlled condition by extracting vegetable proteins. It ishighly nutritious and supports heavy growth of a wide variety of microorganisms. Recommended concentration for use is 0.3 - 0.5% w/v and the growth promoting properties are comparable to Beef Extract Powder.

Principle

Accu Veg Extract BE complements the nutritive properties of peptone by contributing carbohydrate, vitamins, & amino acids. Vegetable Extract is a meat-free alternative to traditional peptones. With a wide distribution of peptides it meets the requirements for replacing Peptone from meat, enzymatic digest to yield maximum growth of variety of microorganisms.

Colour and appearance

Light Yellow coloured, free flowing, freely dissolve in distilled water. Insoluble in chloroform and ether.

Direction of preparation

Refer to the final concentration of Accu Veg Extract BE in the formula of the medium being prepared.

Applications

It can be used successfully in following culture media in place of Beef Extract:

General purpose media: Beef Extract Agar / Broth and Nutrient Agar / Broth etc.

Diagnostic media: CLED Agar, DCLS Agar, TSI Agar, Wilson Blair Agar Base, etc.

Bulk production of antibiotics, enzymes and other products.

Chemical Analysis

Total Nitrogen :	Not less than 9%
α- Amino Nitrogen :	Not less than 3.0%
Sodium Chloride :	Not more than 5%
Loss on drying :	Not more than 5%

Cultural Response :

Cultural response was observed after 18-48 hours at 35-37°C in Nutrient Agar using Acc Veg Extarct BE as an ingredient.

Organisms (ATCC)	Growth
E. coli (25922)	Good-luxuriant
Ps. aeruginosa (27853)	Good-luxuriant
S. aureus (25923)	Good-luxuriant
S. pyogenes (19615)	Good-luxuriant

Storage

Store below 30°C. Use before expiry date on the label.

Accu Veg Extract ME (Meat Extarct) ABV002

Use

Accu Veg Extract ME highly nutritious ingredient, used for cultivation of fastidious microorganisms.

Summary

Accu Veg Extract ME is prepared under controlled conditions by extracting vegetable proteins.

Cultural Response :

Cultural response is comparable with Meat extract powder. 0.3 - 0.5% concentration supports the growth of fastidious organisms, when combined with suitable vegetable peptones.

Principle

Accu Veg Extract ME powder provides amino acids, peptides and other nutrients.

Colour and appearance

Light Yellow coloured, free flowing, freely dissolve in distilled water. Insoluble in alcohol.

Direction of preparation

Refer to the final concentration of Accu Veg Extract ME in the formula of the medium being prepared.

Applications

Accu Veg Extract Me is used in various laboratory media formulations for mass cultivation of organisms for various purposes. It is also employed in bulk production of antibiotics, enzymes and other products.

It is used as follows :

Applications :

General purpose media:

Standard Nutrient Media, Staphylococcus Enrichment Broth, Disinfectant Test Broth, Sterility Test Media A and B, VL Medium etc.

Diagnostic Media:

Yersinia Isolation Agar, Salmonella Agar N Z, Inositol Brilliant Green Bile Agar, Gelatin Iron Agar, Anderson Agar Base, etc.

Bulk production of antibiotics, enzymes and other products of microbiological origin.

Chemical Analysis

Total Nitrogen :	Not less than11%
α- Amino Nitrogen :	Not less than 3.5%
Sodium Chloride :	Not more than5%
Loss on drying :	Not more than5%

Cultural Response :

Cultural response was observed after 18-48 hours at 35-37°C in Sterility Testing Medium A using Accu Veg Extract ME as an ingredient.

Organisms (ATCC)	Growth
Ps. aeruginosa (27853)	Good-luxuriant
S. aureus (25923)	Good-luxuriant
S. faecalis (29212)	Good-luxuriant
B. subtilis (6633)	Good-luxuriant

Storage :

Store below 30°C. Use before expiry date on the label.

Accu Veg Infusion Powder BH (Brain Heart Infusion Powder) ABV003

Use

Accu Veg Infusion Powder BH is used in the preparation of variety of culture media for the cultivation of fastidious microorganisms.

Summary

A dehydrated infusion from vegetable proteins under controlled conditions. Growth supporting properties of this infusion is comparable with Brain Heart Infusion powder.

Principle

Accu Veg Infusion Powder BH supply protein and other nutrients necessary to support the growth of fastidious and non fastidious microorganisms.

Colour and appearance

Light Yellow coloured, free flowing, freely dissolve in distilled water. Insoluble in chloroform and ether.

Direction of preparation

Refer to the final concentration of Accu Veg Infusion Powder BH in the formula of the medium being prepared.

Applications

It is highly nutritious and suitable for cultivation of fastidious organisms, for the fermentative production of vaccines and for preparing Blood Agar. It supports the growth of staphylococci, streptococci, *Haemophilus, Neisseria* and pathogenic fungi.

Chemical Analysis

Total Nitrogen :	Not less than11%
α- Amino Nitrogen :	Not less than 3.5%
Sodium Chloride :	Not more than5%
Loss on drying :	Not more than5%

Cultural Response :

Cultural response was observed after 18-24 hours at 35-37°C in Brain Heart Infusion Agar using Accu Veg Infusion Powder BH as an ingredient

Organisms (ATCC)	Growth
E. coli (25922)	Luxuriant
S. flexneri (12022)	Luxuriant
S. pneumoniae (6303)	Luxuriant
S. aureus (25923)	Luxuriant
C. albicans (26790)	Luxuriant

Storage :

Store below 30°C. Use before expiry date on the label.

Accu Veg Peptone MP (Meat Peptone) ABV004

Use

Accu Veg Peptone MP is used as an ingredient for bacteriological culture media for routine cultivation of variety of microorganisms.

Summary

Accu Veg Peptone MP is an enzymic hydrolysate of specially selected vegetable proteins. It is recommended for use in bacteriological culture media that can

successfully replace meat peptones. It supports good growth of a wide variety of microorganisms in culture media in routine diagnostic and research bacteriology. successfully replace meat peptones. It supports good growth of a wide variety of microorganisms in culture media in routine diagnostic and research bacteriology.

Principle

Accu Veg Peptone MP is meat-free alternative to traditional peptones. With a wide distribution of peptides it meets the requirements for replacing meat extract to yield maximum growth of variety of microorganisms.

Colour and appearance

Light Yellow coloured, free flowing, freely dissolve in distilled water. Insoluble in chloroform and ether.

Direction of preparation

Refer to the final concentration of Accu Veg Peptone MP in the formula of the medium being prepared.

Applications

It is recommended for use in general purpose culture media for routine cultivation of a variety of microorganisms. It can also be used in mass scale cultivation of microorganisms for antibiotics, enzymes, vitamins production or for other similar products of microbial origin.

Chemical Analysi

Total Nitrogen :	Not less than 10%
α- Amino Nitrogen :	Not less than 3.0%
Moisture:	Not less than 5.0%
Sodium Chloride :	Not more than 5%

Cultural Response :

Cultural response was observed after 18-24 hours at 35-37°C in BPL Agar using Accu Veg Peptone MP as an ingredient

Organisms (ATCC)	Growth	Colour of colony
E. coli (25922)	Good-luxuriant	Yellow
*S.*serotype Enteritidis (13076)	Good-luxurient	Pink-red
S. serotype Typhimurium (14028)	Good-luxuriant	Pink-red

Storage :

Store below 30°C. Use before expiry date on the label.

Accu Veg Peptoe PB (Peptone Bacteriological) ABV005

Use

Accu Veg Peptoe PB is used as an ingredient for preparation of culture media for a variety of bacteria and fungi.

Summary

Accu Veg Peptoe PB is manufactured under controlled conditions from vegetable proteins. It is especially adapted for the preparation of media for culturing fastidious bacteria and supports cultural characteristics comparable with Peptone special.

Principle

It contain nitrogen in form that is readily available for bacterial metabolism. It has a high peptide and amino acid content.

Colour and appearance

Sea mist coloured, free flowing, freely dissolve in distilled water. Insoluble in alcohol.

Direction of preparation

Refer to the final concentration of Accu Veg Peptone PB in the formula of the medium being prepared.

Applications

It can be used for the preparation of media for cultivation of following bacteria:

Neisseria species: G C Agar Base, Thayer Martin Medium Base.

Yersinia species : Yersinia Selective Agar Base.

Staphylococci and Streptococci: Columbia Agar Base.

It can also be used for cultivation of other fastidious bacteria on large scale.

Chemical Analysis

Total Nitrogen :	Not less than 11%
α- Amino Nitrogen :	Not less than 3.0%
Sodium Chloride :	Not more than 5%
Loss on drying :	Not more than 6%

Cultural Response :

Cultural response was observed after 40 - 48 hours at 35 - 37°C in Columbia Blood Agar Base using Accu Veg Peptone PB as an ingredient.

Organisms (ATCC)	Growth	w/5% blood Haemolysis
N. meningitidis (13090)	Good-luxuriant	none
S. aureus (25923)	Good-luxuriant	β or g
S. epidermidis (12228)	Good-luxuriant	g
S. pneumoniae (6303)	Good-luxuriant	a
S. pyogenes (19615)	Good-luxuriant	β

Storage :

Store below 30°C. Use before expiry date on the label.

Accu Veg Peptone PR (Proteose Peptone) ABV006

Use

Accu Veg Peptone PR is used as an ingredient for preparation of culture media for a variety of microorganisms and in producing bacterial toxins.

Summary

Media incorporating this peptone are suitable for the the cultivation of different bacteria with a wide range of nutritional requirements. It is valuable in the production of bacterial toxins like *C.botulinum toxin, C. diptheria, C.perfringens* toxin, toxin of haemolytic streptococci and *Salmonella pullorum.*

Principle

It is rich in proteoses, peptones and free amino acids. It provides nitrogen in a form that is readily available for bacterial growth.

Colour and appearance

Light Yellow coloured, free flowing, freely dissolve in distilled water, insoluble in alcohol.

Direction of preparation

Refer to the final concentration of Accu Veg Peptone PR in the formula of the medium being prepared.

Applications

Accu Veg Peptone PR is an enzymic hydrolysate of vegetable protein and can be employed in media for bulk production of antibiotics, enzymes, veterinary preparation, bacterial toxins, etc. It can successfully replace Proteose peptone.

Chemical Analysis :

Total Nitrogen :	Not less than 10.0 %
a - Amino Nitrogen :	Not less than 3.5%
Sodium chloride :	Not more than 5.0%
Loss on drying :	Not more than 5.0%

Cultural Response :

Cultural response was observed after 18-24 hours at 35 - 37°C on Beef Lactose Agar where Accu Veg Peptone PR is used as an ingredient.

Organisms (ATCC)	Growth
E. coli (25922)	Good-luxuriant
S. aureus (25923)	Good-luxuriant
B. cereus (10876)	Good-luxuriant
B. subtilis (6633)	Good-luxuriant
C. albicans (10231)	Good-luxuriant

Storage and Shelf life :

Store below 30°C. Use before expiry date on the label.

Selective Supplements, Agents and Enrichments

Chemicals and antimicrobials are added to culture media to make them selective for certain organisms. The selective agents are chosen and added at specific concentrations to suppress the growth of unwanted microorganisms in a polymicrobial sample.

Accumix freeze dried, selective supplements, agents and growth supplements are used to prepare selective, differential or enriched culture media.

Readymade Selective Supplements

Selective supplements are freeze dried accurate preparations of antimicrobials which are added, normally one vial per 500 ml sterile cooled base nutrient medium to create specific, selective media. Selection does not lie solely in the antimicrobial supplement; it is often a combination of specific nutrient base with the supplement. Thus specified basal media formulations are paired with specific selective supplements and the results can be predicted.

The percentage or concentration of antimicrobial mixtures in the supplements is based on the published papers wherein different strains of organisms have been tested for their MIC values. However, there is every possibility that the strains at different places may have different MIC values.

Different strains of the organisms vary in their resistance to the selective agents and in some cases the concentration of the agent may exceed or be close to a level that a very sensitive strain will not tolerate. Hence, media must be chosen rationally to match their purpose and the user must be aware of the limitations of the different formulations under the conditions of use. For best performance, the medium must be sensitive enough to detect the presence of a very small number of organisms that might have been stressed or actually damaged. The various ingredients of the medium must be matched for best performance, hence the selective agent(s) and the medium base must be considered as a complete set. It is well known that identical quantities of selective substances will perform

differently in different nutrient bases. This is because their disruptive activity in the organisms metabolism is heavily influenced by the presence of growth factors, minerals, protective substances, pH etc.

The supplements are presented in packs of glass vials and the contents of each vial is specified under respective supplement.

General guidelines for the preparation of selective culture media: -

1. Care must be taken to use completely clean equipment; residues from incomplete cleaning can have a significant effect. Prevent cross contamination of one medium with another through used spatula, pipettes, balance pans, measuring devices, etc.
2. Glass distilled water should preferably be used for rehydration.
3. In most cases, the selective supplements should be added aseptically post sterilization of the medium.
4. Rehydrate the vial aseptically using a sterile needle and syringe charged with around 5 ml of the specified diluent for the particular supplement being added. Rehydrate, withdraw and add the supplement to the medium in a single process, followed by immediate disposal of the syringe into an approved container.
5. The antibiotics used are heat labile and hence to prevent reduction in potency, the medium must be cooled to 47-48°C by holding in a water bath set at this temperature. After addition, the medium must be gently but thoroughly mixed to ensure that the antibiotics are uniformly distributed throughout the medium.
6. Selective agents containing antibiotics may be labile in solution. Antibiotics are best kept dry until the time of use.
7. The medium should be used as soon as possible after preparation, however, if required to store, it should be stored in a cool, moist and dark place to keep changes in the medium to a minimum.
8. Once rehydrated, the stability of antibiotics varies greatly and will determine the shelf life of the medium and broth. Therefore, any unused, rehydrated supplement must be discarded.

STORAGE - All selective supplements must be stored at 2°-8°C

Selective Agents

Bile Salts

Bile derivatives like bile salts, bile salt mixtures and pure substances like sodium deoxycholate and sodium taurocholate are used as selective agents mainly to inhibit gram-positive organisms, non-intestinal organisms and spore formers while permitting the growth of gram-negative enterics.

STORAGE - All selective agents are to be stored at Room Temperature (RT) below 30°C unless otherwise specified.

Enrichments

Enrichments when added to the medium provide one or other growth factors and nutrients specifically required by the particular organism. Sterile enrichments are supplied in ready to use form as solutions or powders. Horse and sheep blood serum are the most widely used enrichments in culture media.

STORAGE - All sterile enrichments must be stored at 2-8°C; however horse serum must be stored at -20°C.

Bacteroides Selective Supplement AS001

An antibiotic supplement recommended for selective isolation of *Bacteroides* species.

Reagent Composition: (per vial, sufficient for 500 ml medium) Gentamycin 50 mg

Directions

1. Rehydrate the contents of 1 vial aseptically with 5 ml sterile distilled water.
2. Mix well and aseptically add it to 500 ml sterile, molten Bacteroides Bile Esculin Agar, (AM1010/ AM5010) (30.76 gm/500ml).
3. Mix well and dispense as desired.

Bile Salts (Ox Bile) AS002

A selective agent used in bacteriological culture media to inhibit gram-positive microorganisms. Bile Salts contain extract standardized to provide inhibitory properties to selective media. Bile Salts for bacteriological use is extracted under controlled conditions from purified fresh bile to be used in microbiological culture media as a selective inhibitory agent. Fresh bile is desiccated by a low temperature dehydration process to ensure a uniform product.

It is a yellowish green coloured, homogeneous, fine powder, having characteristic bile like odour with partly bitter, partly sweet and disagreeable taste. It is freely soluble in water and the aqueous solution is clear, yellow coloured. The solution remains clear after autoclaving without developing any precipitate or scum on the surface of the liquid. In culture media, bile salts do not affect the colour of indicator dyes or their subsequent change in colour.

Bile Salts is recommended for use in MacConkey Agar, MacConkey Broth, etc.

Directions

1. Refer to the final concentration in the formula of the medium being prepared.

Bile Salts No. 3 AS003

A selective agent used in bacteriological culture media to inhibit gram-positive microorganisms. Bile Salt Mixture contains extract standardized to provide inhibitory properties to selective media. It is a modified fraction of bile acid salts, providing a refined bile salt and is generally effective at less than one-third concentration of bile salts. Bile Salts Mixture is obtained from purified fresh bile, which is repeatedly extracted to purify and retain inhibitory properties.

It is a white coloured, free flowing fine powder, freely soluble in water and forms a colourless, clear solution that produces foam if shaken.

Bile Salts Mixture is recommended for use in SS Agar, Violet Red Bile Agar, EC Broth, etc. It selectively inhibits gram-positive and spore bearing microorganisms while allowing enteric bacilli to grow. In SS Agar and Violet Red Bile Agar very little precipitate is observed around coliform colonies facilitating the detection of non-lactose fermenting colonies. (It gives a very sharp differentiation between lactose fermenters and non-lactose fermenters of enteric origin permitting the detection of scanty non-lactose fermenters in the presence of numerous coliforms).

Directions

1. Refer to the final concentration in the formula of the medium being prepared.

Bordetella Selective Supplement AS004

An antibiotic supplement recommended for the selective isolation of *Bordetella pertussis.*

Reagent Composition: (per vial, sufficient for 500 ml medium) Cephalexin 20 mg

Directions

1. Rehydrate the contents of 1 vial aseptically with 2 ml sterile distilled water.
2. Mix well and aseptically add to 500 ml sterile Bordet Gengou Agar Base (AM1015/AM5015), (20gm/500ml) along with 10% v/v defibrinated horse blood.
3. Mix well and dispense as desired.

BP Sulpha Supplement AS005

An antibiotic supplement recommended for use in Baird Parker Agar Base (AM1011/AM5011) to suppress the growth of *Proteus* species.

Reagent Composition: (per vial, sufficient for 1000 ml medium)

Sulphamethazine	50 mg

Directions

1. Rehydrate the contents of 1 vial with 5 ml sterile 0.01N sodium hydroxide.
2. Mix well and aseptically add to 950 ml sterile, molten Baird Parker Agar Base (AM1011/AM5011) (63 gm/950 ml) along with 50 ml Egg Yolk Tellurite Emulsion (AS011)
3. Mix well and dispense as desired.

Brucella Selective Supplement, Modified AS006

An antibiotic supplement recommended for the selective isolation of *Brucella* species from milk.

Reagent Composition: (per vial, sufficient for 500 ml medium)

Nystatin	50000 IU
Bacitracin	12500 IU
Polymixin B	2500 IU
Natamycin	50.00 mg
Vancomycin	10.00 mg.
Nalidixic Acid	2.50 mg

Directions

1. Rehydrate the contents of 1 vial aseptically with 5 ml of 50% v/v methanol and shake to form a uniform suspension.
2. Add the contents to 500 ml sterile molten Columbia Blood Agar Base (AM1029/AM5029), (22gm/500ml) containing 5-10% v/v inactivated Horse Serum (AS015) and 1% w/v sterile dextrose.
3. Mix well and dispense as desired.

Campylobacter Selective Supplement (Blaser-Wang) AS0061

An antibiotic supplement recommended for selective isolation of *Campylobacter* species.

Reagent Composition: (per vial, sufficient for 500 ml medium)

Polymyxin B	1,250 IU
Vancomycin	5.00 mg
Trimethoprim	2.5 mg
Amphotericin B	1.0 mg
Cephalothin	7.5 mg

Directions

1. Rehydrate the contents of 1 vial aseptically with 5 ml of sterile distilled water.
2. Mix well and aseptically add to 500 ml sterile, molten Campylobacter Agar Base (AM50218), (19.75gm/490ml).
3. Mix well and dispense as desired.

Campylobacter Selective Supplement with Hemin (Karmali), Modified AS007

An antibiotic Supplement recommended for the isolation of thermotolerant *Campylobacter* species.

Reagent Composition: (per vial, sufficient for 490 ml medium)

Sodium Pyruvate	50.00 mg
Hemin	16.00 mg
Cefoperazone	16.00mg
Vancomycin	10.00 mg
Amphothericin B	5.00 mg

Directions

1. Rehydrate the contents of 1 vial aseptically with 5 ml of 95% ethanol.
2. Mix well and aseptically add to 490 ml sterile, molten Karmali Campylobacter Agar Base (AM1049/AM5049), (22.5gm/490ml).
3. Mix well and dispense as desired.

Campylobacter Supplement (Skirrow) AS0071

An antibiotic supplement recommended for selective isolation of *Campylobacter* species.

Reagent Composition: (per vial, sufficient for 500 ml medium)

Polymyxin B	1,250 IU
Vancomycin	5.00 mg
Trimethoprim	2.5 mg

DIRECTIONS

1. Rehydrate the contents of 1 vial aseptically with 2 ml of sterile distilled water.
2. Mix well and aseptically add to 500 ml sterile, molten Campylobacter Agar Base (AM50218),(19.75gm/490ml).
3. Mix well and dispense as desired.

Cetrinix Supplement AS008

An antibiotic supplement recommended for the selective isolation of *Pseudomonas* species.

Reagent Composition: (per vial, sufficient for 500 ml medium)

Cetrimide	100.00 mg
Nalidixic Acid	7.50 mg

Directions

1. Rehydrate the contents of 1 vial aseptically with 2 ml sterile 0.2 N sodium hydroxide.
2. Mix well and aseptically add to 500 ml sterile, molten Pseudomonas Agar Base (AM1084/AM5084), (24.2gm/500ml).
3. Mix well and dispense as desired.

CFC Supplement AS009

An antibiotic supplement recommended for the selective isolation of *Pseudomonas* species.

Reagent Composition: (per vial, sufficient for 500 ml medium)

Cetrimide	5.00 mg
Fucidin	5.00 mg
Cephaloridine	25.00 mg

Directions

1. Rehydrate the contents of 1 vial aseptically with 2 ml sterile distilled water and mix well.
2. Aseptically add to 500 ml sterile, molten Pseudomonas Agar Base (AM1084/AM5084), (24.2gm/500ml)
3. Mix well and dispense as desired.

Chloramphenicol Selective Supplement AS00911

An antibiotic supplement recommended for selective isolation of yeast and moulds.

Reagent Composition: (per vial, sufficient for 500 ml medium)

Chloramphenicol	50 mg

Direction:

1. Rehydrated the contents of 1 vial aseptically with 2 ml of ethanol.
2. Mix well and aseptically add to 500 ml of sterile, molten Rose Bengal agar Base (AM50856), (15.78gm/500ml).
3. Mix well and pour into sterile petri plates.

Diptheria Virulence Supplement (Part A & Part B) AS0091

Use

An antibiotic supplement recommended for selective isolation and presumptive identification of *Corynebacterium diptheriae.*

Reagent Composition: (per vial, sufficient for 1000 ml medium)

PART A: Horse serum	100.00 ml
PART B: Potassium tellurite 1%	30.00 ml

Directions

1. Warm up the refrigerated contents of 1 vial to 50^{0}C and aspectically add to sterile, molten Tinsdale Agar Base (AM50693), (40.70gm/1000ml).
3. Mix well and dispense as desired.

Egg Yolk Emulsion AS010

A sterile, stabilized emulsion of egg yolk recommended for use in culture media.

Reagent Composition: (100 ml per vial)

Egg Yolk	30.0 ml
Sterile Saline	70.0 ml

Directions

1. Warm the refrigerated Egg Yolk Emulsion to 40-45^{0}C and shake well to attain a uniform emulsion.
2. Aseptically add 50 ml emulsion to sterile, molten Baird Parker Agar Base (AM1011/AM5011), (63gm/950ml), Mannitol Salt Agar Base (AM1069/AM5069), (111gm/1000ml) and Bacillus Cereus Agar Base (AM1009/AM5009), (41gm/950ml).
3. Mix well and dispense as desired.

Egg Yolk Tellurite Emulsion — AS011

A sterile, stabilized tellurite emulsion of egg yolk recommended for identification of *Staphylococcus* species.

Reagent Composition: (100 ml per vial)

Egg Yolk	30.00 ml
Sterile Saline	64.00 ml
Sterile 3.5% Potassium Tellurite Solution	6.00 ml

Directions

1. Warm up the refrigerated contents of 1 vial to 45-50°C.
2. Aseptically add 50 ml in 950 ml sterile, molten Baird Parker Agar Base (AM1011/AM5011), (63gm/950ml).
3. Mix well and dispense as desired.

Fraser Enrichment Supplement — AS0111

An antibiotic supplement recommended for isolation, cultivation and identification of *Listeria monocytogenes* from foods and environmental specimens.

Reagent Composition: (per vial, sufficient for 1000 ml medium)

Acriflavin hydrochloride	25 mg
Nalidixic acid	4 mg

Direction:

1. Rehydrated the contents of 1 vial aseptically with 10 ml of sterile 0.2 N sodium hydroxide..
2. Mix well and aseptically add to 990 ml of sterile, Fraser Secondary Enrichment Broth Base (AM50457), (57.85gm/1000ml).
3. Mix well and and dispense as desired.

Fraser Selective Supplement — AS0112

An antibiotic supplement recommended for selective isolation, cultivation and identification of *Listeria monocytogenes* from foods and environmental specimens.

Reagent Composition: (per vial, sufficient for 1000 ml medium)

Acriflavin hydrochloride	25 mg
Nalidixic acid	20 mg

Direction:

1. Rehydrated the contents of 1 vial aseptically with 10 ml of sterile 0.2 N sodium hydroxide..
2. Mix well and aseptically add to 990 ml of sterile, Fraser Secondary Enrichment Broth Base (AM50457), (57.85gm/1000ml).
3. Mix well and and dispense as desired.

Fraser Selective Supplement ISO — AS0113

An antibiotic supplement recommended by ISO for selective isolation, cultivation and identification of *Listeria monocytogenes* from foods and environmental specimens.

Reagent Composition: (per vial, sufficient for 1000 ml medium)

Acriflavin hydrochloride	12.50 mg
Nalidixic acid	10.00 mg

Direction:

1. Rehydrated the contents of 1 vial aseptically with 10 ml of sterile 0.2 N sodium hydroxide..
2. Mix well and aseptically add 1 vial to 1000 ml of sterile, Fraser Broth Base (AM50456), (54.92gm/ 1000ml) or to 500 ml sterile Fraser Base (AM50456) for secondary enrichment.
3. Mix well and and dispense as desired.

Fraser Supplement — AS0114

An antibiotic supplement recommended by ISO for selective isolation, cultivation and identification of *Listeria monocytogenes* from food, animal feed and environmental specimens.

Reagent Composition:

Ferric ammonium citrate	250.00 mg

Direction:

1. Rehydrated the contents of 1 vial aseptically with 1-2ml of distilled water.
2. Mix well. For primary enrichment aseptically add 2 vial to 1000 ml of sterile, Fraser Broth Base (AM50456), (54.92gm/1000ml) or add 1 vial to 500 ml sterile Fraser Broth Base (AM50456) for secondary enrichment.
3. Mix well and and dispense as desired.

GC Supplement AS012

An enrichment and antibiotic supplement recommended for the selective isolation of pathogenic *Neisseria.*

Reagent Composition: (per vial, sufficient for 500 ml medium)

Dextrose	0.75 gm
Sodium Bicarbonate	0.075 gm
Yeast Autolysate	5.00 gm
Vancomycin	1.50 mg
Colistin Methane Sulphonate	3.75 mg
Trimethoprim	2.50 mg
Nystatin	6250 units

Directions

1. Rehydrate the contents of 1 vial aseptically with 15 ml sterile distilled water.
2. Mix well and aseptically add to sterile, molten 500 ml GC Agar Base (AM1046/AM5046), (18gm/235 ml).
3. Mix well and dispense as desired along with 250 ml of sterile haemoglobin solution (AS014).

Gruft Mycobacterial Supplement AS013

An enrichment and antibiotic supplement recommended for the selective cultivation of *mycobacteria.*

Reagent Composition: (per vial, sufficient for 400 ml medium)

Nalidixic Acid	14.00 mg
Ribonucleic Acid	20.00 mg
Penicillin	20000 IU

Directions

1. Rehydrate the contents of 1 vial aseptically with 2.5 ml sterile 0.2 N sodium hydroxide.
2. Mix well and add to 400 ml sterile, molten Lowenstein Jensen Medium (AM1057/AM5057), containing whole egg emulsion. Appropriate concentrations of the supplement can be achieved by absorbing 0.05 ml of reconstituted supplement on slants prepared from 8.0 ml LJ Medium.

Haemoglobin Powder Soluble AS014

An enrichment supplement whose 2% w/v solution is autoclavable.

Reagent Composition: (100 gms per vial)

Add 250 ml distilled water to 5 gm Haemoglobin Powder to make a 2% w/v solution. Stir the solution continuously while adding the water and autoclave at 121°C for 15 minutes. Shake well to resuspend sedimented haemoglobin.

Directions

1. Aseptically add 250 ml sterile 2% solution to 235 ml sterile, molten GC Agar Base (AM1046/AM5046), (18gms/235 ml) along with GC Supplement (AS012) to make double strength base.

Horse Serum AS015

An enrichment supplement recommended for isolation and cultivation of *Mycoplasma, Trichomonas, Streptococcus* species and *C.diphtheriae.*

Reagent Composition: (100 ml per vial)

Horse Serum	100 ml

Directions

1. Warm up the refrigerated contents to 50°C in a water bath and aseptically add 300 ml to 700 ml Mycoplasma Agar Base (AM1073/AM5073), (36gm/700 ml) and 750 ml to 250 ml Loeffler Medium Base (AM1056/AM5056) (8.8gm/250 ml).
2. Mix well and dispense as desired.

Lactic Supplement — AS0151

A supplement for selective isolation of lactic acid bacteria in beer and brewing procedures.

Reagent Composition:

0.1% cycloheximide solution	7.0ml
Sorbitan mono-oleate	10ml
2-Phenylethanol	3.0g

Direction:

1. Warm up the refrigerated supplement to 45-50°C.
2. Shake well to form uniform suspension.
3. Aseptically add it to 1000 ml of sterile, molten Raka Ray Agar Base (Lactic Acid Bacteria Selective agar Base) (AM10844), (38.55gm/500ml) and Raka Ray No. 3 Broth Base (Lactic Acid Bacteria Selective Broth Base) (AM10845) (29.45gm/500ml).
4. Mix well and and dispense as desired.

Legionella Growth Supplement — AS016

An enrichment supplement used for enhancing growth of *Legionella* species.

Reagent Composition: (per vial, sufficient for 500 ml medium)

L- Cysteine Hydrochloride	200.00 mg
Ferric Pyrophosphate, Soluble	125.00 mg

Directions

1. Rehydrate the contents of 1 vial aseptically with 5 ml sterile distilled water.
2. Mix well and aseptically add to 500 ml sterile, molten Legionella Agar Base (AM1054/AM5054), (18.5gm/500 ml) along with Legionella Selective Supplement (AS017).
3. Mix well and dispense as desired.

Legionella Selective Supplement — AS017

An antibiotic supplement recommended for the selective isolation of *Legionella* species.

Reagent Composition: (per vial, sufficient for 500 ml medium)

Amphotericin B	1.25 mg
Vancomycin	2.50 mg
Trimethoprim	1.25 mg
Colistin Sulphate	7500 units

Directions

1. Rehydrate the contents of 1 vial aseptically with 2 ml sterile distilled water.
2. Mix well and aseptically add to 500 ml sterile, molten Legionella Agar Base (AM1054/AM5054) (18.5gm/500 ml) along with Legionella Growth Supplement (AS016).
3. Mix well and dispense as desired.

Listeria Moxalactam Supplement — AS0171

An antibiotic supplement recommended for the isolation of *Listeria monocytogenes* from mixed flora.

Reagent Composition: (per vial, sufficient for 500 ml medium)

Colistin	5.00 mg
Moxalactam	7.50 mg

Direction:

1. Rehydrated the contents of 1 vial aseptically with 2 ml of sterile distilled water.
2. Mix well avoiding frothing to dissolve and aseptically add it to 500 ml of sterile, molten Listeria Oxford Medium base (AM105512/505512).
3. Mix well and and pour into sterile petri plates.

Listeria Selective Supplement AS018

An antibiotic supplement recommended for the selective isolation and identification of *Listeria monocytogenes.*

Reagent Composition: (per vial, sufficient for 500 ml medium)

Acriflavin Hydrochloride	2.50 mg
Ceftazidime	10.00 mg
Polymixin B	50000 IU

Directions

1. Rehydrate the contents of 1 vial aseptically with 5 ml sterile distilled water.
2. Aseptically add to 500 ml sterile, molten Listeria Identification Agar Base (PALCAM) (AM1055/AM5055), (34.44gm/500 ml).
3. Mix well and dispense as desired.

Middlebrooke OADC Growth Supplement AS0181

An enrichment supplement recommended for cultivation of *Mycobacteria.*

Reagent Composition: (per vial, sufficient for 500 ml medium)

Bovine albumine fraction V	2.50 gm
Dextrose	1.00 gm
Catalase	0.002 gm
Oleic acid	0.025 gm
Sodium chloride	0.425 gm
Distilled water	50.00 ml

Direction:

1. Warm up the refrigerated supplement to 45-50^{0}C.
2. Shake well to form uniform suspension.
3. Aseptically add to sterile, molten 450 ml of Middlebrook 7H11 Agar Base (AM5069273) (9.8/500 ml).
4. Mix well and and pour into sterile screw capped tubes or containers.

Middlebrooke ADC Growth Supplement AS01811

An enrichment supplement recommended for cultivation of *Mycobacteria.*

Reagent Composition: (per vial, sufficient for 500 ml medium)

Bovine albumine fraction V	2.50 gm
Dextrose	1.00 gm
Catalase	0.0015 gm
Distilled water	50.00 ml

Direction:

1. Warm up the refrigerated supplement to 45-50^{0}C.
2. Shake well to form uniform suspension.
3. Aseptically add to sterile, molten 450 ml of Middlebrook 7H9 Broth Base (AM5069272) (2.35/500 ml).
4. Mix well and and pour into sterile screw capped tubes or containers.

Moxalactam Supplement AS0182

An antibiotic supplement recommended for selective isolation and cultivation of *Listeria monocytogenes.*

Reagent Composition: (per vial, sufficient for 1000 ml medium)

Moxalactam	20.00 mg

Direction:

1. Rehydrated the contents of 1 vial aseptically with 10 ml of sterile distilled water.
2. Mix well and add to 1000 ml of sterile, molten LPM Agar Base (AM10575) (50.5 gm/1000ml).
3. Mix well and and pour into sterile petri plates.

Mycoplasma Enrichment Supplement AS019

An enrichment and antibiotic supplement recommended for the selective isolation of *Mycoplasma* species.

Reagent Composition: (per vial, sufficient for 70 ml medium)

Penicillin G	20000IU

Thallous Acetate	25.00 mg
Horse Serum	20.00 ml
Yeast Extract	10.00 mg

Directions

1. Aseptically add the contents of the vial to 70 ml sterile, molten Mycoplasma Agar Base (AM1073/AM5073), (3.60gm/70 ml).
2. Mix well and dispense as desired.

Nalidixic Selective Supplement AS020

An antibiotic supplement recommended for the selective isolation of *Pseudomonas aeruginosa*.

Reagent Composition: (per vial, sufficient for 1000 ml medium)

Nalidixic Acid	15.00 mg

Directions

1. Rehydrate the contents of 1 vial aseptically with 5 ml sterile 0.2 N sodium hydroxide.
2. Mix well and aseptically add to 1000 ml of sterile, molten Cetrimide Agar Base (AM1022/AM5022), (46.70gm/1000 ml).
3. Mix well and dispense as desired.

Oxford Listeria Supplement AS0201

An antimicrobial supplement recommended for selective isolation *Listeria* species.

Reagent Composition: (per vial, sufficient for 500 ml medium)

Amphotericin B	5.00 mg
Colistin sulphate	10.00 mg
Acriflavin hydrochloride	2.50 mg
Cefotetan	1.00 mg
Fosfomycin	5.00 mg

Direction:

1. Rehydrated the contents of 1 vial aseptically with 5 ml of 50% ethanol.
2. Mix well to dissolve and aseptically add to 500 ml of sterile, molten Listeria Oxford Medium Base (AM105512/505512) (27.75 gm/500ml).
3. Mix well and and pour into sterile petri plates.

Oxytetracyclin-Glucose-Yeast Extract (OGYE) Selective Supplement AS0202

An antibiotic supplement recommended for selective isolation and cultivation of yeasts and moulds.

Reagent Composition: (per vial, sufficient for 500 ml medium)

Oxytetracycline	50.00 mg

Direction:

1. Rehydrated the contents of 1 vial aseptically with 5 ml of sterile distilled water.
2. Mix well to dissolve and aseptically add to 500 ml of sterile, molten Oxytetracyclin-Glucose-Yeast Extract Agar (OGYE Agar) Base (AM507811) (37gm/1000ml).
3. Mix well and and pour into sterile petri plates.

Polymixin B Selective Supplement AS021

An antibiotic supplement recommended for the selective isolation of *B. cereus*.

Reagent Composition: (per vial, sufficient for 475 ml medium)

Polymixin B Sulphate 50000 units

Directions

1. Rehydrate the content of 1 vial aseptically with 2 ml sterile distilled water.
2. Mix well and aseptically add to 475 ml sterile, molten Bacillus Cereus Agar Base (AM1009/AM5009), (20.50gm/475 ml) along with 25 ml sterile Egg Yolk Emulsion (AS010).
3. Mix well and dispense as desired.

Potassium Lactose 50% (10ml/Vial) AS0211

A filter sterilized supplement recommended for isolation and enumeration of wild yeasts in pitching yeasts.

Reagent Composition: (per vial, sufficient for 1000 ml medium)

50% Potassium lactate	10.00 ml

Direction:

1. Add contents of 1 vial to 990 ml of distilled water.
2. Mix well to dissolve and aseptically add to 1000 ml of sterile, molten Lysine Medium (AM10577/50577) (66.00 gm/1000ml).
3. Boil to dissolve the medium completely.
4. Cool to 50°C.
5. Adjust the pH to 5 and Pour into sterile plates.

Potassium Tellurite 1% AS022

A filter sterilized supplement recommended for the selective isolation of *Staphylococci.*

Reagent Composition: (10 ml per vial)

Potassium Tellurite	0.10 gm
Distilled Water	10.00 ml

Directions

1. Warm the refrigerated content of 1 vial to 45-50°C.
2. Mix well and aseptically add to sterile, molten Vogel Johnson Agar Base (AM1108/AM5108), (30.50gm/500 ml).
3. Mix well and dispense as desired.

Potassium Tellurite 3.5% AS023

A filter sterilized supplement recommended for the selective isolation of *Staphylococci.*

Reagent Composition: (10 ml per vial)

Potassium Tellurite	0.35 gm
Distilled Water	10.00 ml

Directions

1. Warm the refrigerated content of 1 vial to 45-50°C.
2. Mix well and aseptically add 3 ml to 950 ml sterile, molten Baird Parker Agar Base (AM1011/AM5011), (63gm/950 ml) along with 50 ml sterile Egg Yolk Emulsion (AS010).
3. Mix well and dispense as desired.

Preston Selective Supplement (Campylobacter Selective Supplement IV, Modified) AS0231

A supplement recommended for the selective isolation of *Campylobacter* species.

Reagent Composition: (per vial, sufficient for 500 ml medium)

Polymyxin B	2,500 IU
Rifampicin	5.0 mg.
Trimethoprim Lactate	5.0 mg.
Amphotericin B	5.0 mg.

Directions

1. Rehydrate the contents of 1 vial aseptically with 5 ml of 50% acetone.
2. Mix well and aseptically add to 500 ml sterile molten Preston Agar Base (AM10831/AM50831) (18.50gm/500 ml).
3. Mix well and dispense as desired.

Rosolic Acid (0.1 gms per vial) AS0232

A supplement recommended for selective isolation of coliform bacteria.

Reagent Composition: (per vial, sufficient for 1000 ml medium)

Rosolic acid	0.10 gm

Direction:

1. Rehydrated the contents of 1 vial aseptically with 10 ml of 0.2 N sodium hydroxide..
2. Mix well to dissolve and aseptically add to 990 ml of boiled M-FC Agar Base (AM506923)(52.10gm/1000ml) and M-FC Broth Base (AM506924) (37.10gm/1000ml), warm it for 1 – 2 minutes.
3. Mix well and and dispense as desired.

Sodium Deoxycholate AS024

A selective agent used in bacteriological culture media to inhibit gram-positive microorganisms. Sodium Deoxycholate is the sodium salt of deoxycholic acid. Since it is a salt of a highly purified bile acid, it is used in culture media in lower concentrations than naturally occurring bile.

Sodium Deoxycholate is used in Deoxycholate Citrate Agar, Xylose Lysine Deoxycholate Agar, Tetrathionate Broth Base, etc.

Directions

1. Refer to the final concentration in the formula of the medium being prepared.

Staph-Strepto Supplement AS025

An antibiotic supplement recommended for the selective isolation of *Staphylococcus* and *Streptococcus* species.

Reagent Composition: (per vial, sufficient for 500 ml medium)

Nalidixic Acid	7.50 mg
Colistin Sulphate	5.00 mg

Directions

1. Rehydrate the content of 1 vial aseptically with 2 ml sterile 0.2 N sodium hydroxide.
2. Mix well and aseptically add to 500 ml sterile, molten Columbia Blood Agar Base (AM1029/AM5029), (22gm/500ml), along with 25 ml sterile defibrinated horse blood.
3. Mix well and dispense as desired.

Strepto Supplement AS026

An antibiotic supplement recommended for the selective cultivation of *Streptococcusb* species.

Reagent Composition: (per vial, sufficient for 500 ml medium)

Nalidixic Acid	3.75 mg
Neomycin Sulphate	1.06 mg
Polymixin B Sulphate	8500 units

Directions

1. Rehydrate the content of 1 vial aseptically with 2-5 ml sterile 0.2 N sodium hydroxide.
2. Aseptically add the contents to 500 ml sterile, molten Columbia Blood Agar Base (AM1029/AM5029), (22gm/500ml). The medium may be enriched with 7% v/v sterile defibrinated blood.
3. Mix gently and dispense as desired.

Sulpha Supplement AS027

An antibiotic supplement recommended for the selective isolation of *Salmonella* species.

Reagent Composition: (per vial, sufficient for 500 ml medium)

Sodium Mandelate	125.00 mg
Sodium Sulphaacetamide	500.00 mg

Directions

1. Rehydrate the content of 1 vial aseptically with 5 ml sterile 0.2 N sodium hydroxide.
2. Mix well and aseptically add to 500 ml sterile, molten Brilliant Green Agar, Modified (AM1018/AM5018), (29.05gm/500ml).
3. Mix well and dispense as desired.

TTC Solution 1% (10ml per vial) AS0271

A filter sterilized solution recommended for the detection of microbial growth using TTC (2, 3, 5,- Triphenyl Tetrazolium Chloride) reduction.

Reagent Composition: (per vial, sufficient for 1000 ml medium)

2, 3, 5,- Triphenyl Tetrazolium Chloride	0.10 gm
Distilled water	10.00 ml

Direction:

1. Warm up refrigerated 1% TTC Solution to around 50°C
2. Add sterile, molten culture media as, 2.5 ml in 1000 ml of Modified Tergitol 7 Agar Base ISO (AM506932) (57.15gm/1000ml), 3 ml in 1000 ml of Tergitol 7Agar Base (AM10951/50951) (33.13gm/1000ml) and Tergitol7Agar Base BIS (AM10952 / 50952) (33.13 gm/1000 ml).
3. Mix well and pour into sterile petri plates.

Urea 40% AS028

A filter sterilized supplement recommended for the detection of urease activity.

Reagent Composition: (5 ml per vial)

Urea	2.00 gm
Distilled Water	5.00 ml

Directions

1. Warm the refrigerated contents to room temperature.
2. Aseptically add the content of 1 vial to 95 ml sterile, molten Urea Agar Base, Christensen (AM1105/AM5105), (2.40gm/95ml) or Urea Broth Base (AM1106/AM5106), (1.87gm/95ml).
3. Mix well and dispense as desired.

XLT4 Supplement AS0281

XLT4 supplement recommended for selective isolation of *Salmonella* species other than *Salmonella typhi.*

Reagent Composition: (4.6 ml, sufficient for 1000 ml medium)

Tergitol 4	1.00 gm
Methanol	100.00 ml

Direction:

1. Warm up refrigerated XLT4 supplement (AS0281) to 45-50°C and use in XLT4 agar Base (AM571251).
2. Mix well and pour into sterile petri plates.

Yersinia Selective Supplement AS029

An antibiotic supplement recommended for the selective isolation of *Yersinia enterocolitica.*

Reagent Composition: (per vial, sufficient for 500 ml medium)

Cefsulodin	7.50 mg
Novobiocin	1.25 mg
Triclosan	2.00 mg

Directions

1. Rehydrate the content of 1 vial aseptically with 2 ml sterile distilled water and 1 ml ethanol and mix well to dissolve the contents completely.
2. Aseptically add to 500 ml sterile, molten Yersinia Selective Agar Base (AM1160/AM5116), (29.03gm/500ml).
3. Mix well and dispense as desired.