

CULTURE MEDIA DESCRIPTIONS

General Purpose Media

General purpose media are designed to grow most organisms and do not contain growth inhibitors. Standard Methods Agar and Blood Agar Bases are examples of general purpose media.

Differential Media

Differential media contain a component that allow an observable change when a specific chemical reaction takes place. Simmons Citrate Agar is an example of a differential medium. In Simmons Citrate Agar, there is a pH indicator that turns from green to blue when citrate is utilized as the sole carbon source.

Selective Media

Selective media encourage the growth of some organisms and suppress the growth of others. Dyes, antimicrobials, and salts are all examples of selective agents used for this purpose. Bile Salts are used to inhibit the growth of Gram-positive organisms on MacConkey Agar.

Selective/Differential Media

A medium can be both selective and differential depending on the formula. Hektoen Enteric Agar is an example of a selective and differential medium. Hektoen Enteric Agar contains Bile Salts, the selective agent used to suppress Gram-positive organisms, along with pH indicators, acid fuchsin, and bromthymol blue.

Enrichment Media

Enrichment media contain nutrients that encourage the growth of organisms. Media containing enrichments can be selective or general purpose. Universal Pre-enrichment Broth is a general purpose enrichment broth for *Salmonella* and *Listeria*, and is particularly successful at resuscitating injured cells that exist in low numbers.

Chemically-defined Media

Chemically-defined media are made of specific types and amounts of pure chemicals. Tissue culture media are examples of chemically defined basal formulations.

Agar

Agar is the technical name of the gelling agent most commonly used in culture media. The term agar frequently refers to a solid surface, plated medium. Plated media are used for isolating pure colonies or counting numbers of colonies. Organism identification is possible after obtaining pure colonies.

Agar Slants

Agar containing media that have solidified in tubes in a slanted position are referred to as slants. Triple Sugar Iron Agar is an example of a medium that is prepared in slants and used for organism identification.

Broths

Broths are referred to as any liquid culture medium. Tryptic Soy Broth is an example of a widely used broth formula.

Semisolid Media

Semisolid media are between a solid and a liquid state. Agar added in low concentrations achieve fluidity but not at a concentration that will result in a firm gel. Motility Test Medium is an example of a semisolid medium. Bacterial motility may be observed macroscopically as a diffuse zone of growth spreading from the line of inoculation.

