INTERNATIONAL SERUM
INDUSTRY ASSOCIATION

Glossary of Terms and Definitions

Whole Fresh Blood
Whole fresh blood is not modified, treated or processed and contains no additives.

Whole Blood
Whole blood may contain anti-coagulants, but otherwise is not modified, treated or processed and contains no other additives.

Plasma
Plasma is the liquid fraction of un-clotted blood. After the addition of an anticoagulant to fresh whole blood, plasma is prepared by centrifuging the mixture until the red and white blood cells separate from the liquid phase. The plasma is then removed and may be stored frozen pending further use or processing.

Serum
Serum is the liquid fraction of clotted blood. It is depleted of cells, fibrin and clotting factors. Serum differs from plasma in that anti-coagulant is never added to the blood after collection from the animal. Serum is prepared by centrifuging until the clot and remaining blood cells are separated from the liquid phase. The serum is then removed and stored frozen pending further processing.

Fetal Bovine Serum

Semi-processed Fetal Bovine Serum
Fetal bovine serum (FBS) is obtained as described above from the blood of fetuses of healthy, pre-partum bovine dams that have been deemed fit for human consumption through ante- and/or post-mortem veterinary inspection. It is collected in abattoirs inspected by the competent authority in the country of origin. Fetal blood is collected aseptically using cardiac puncture, thereby reducing the risk of microbial contamination and resultant endotoxins. Collection

occurs in an area of the abattoir specifically set aside for this purpose to minimize the risk of contamination by other fluids.

Fetal blood is allowed to clot and is then centrifuged. Semi-processed FBS is the liquid fraction of the clotted fetal blood. After separation by centrifugation, no further processing or treatment of the semi-processed FBS is allowed. Also no additions (including preservatives) or deletions are allowed. Semi-processed FBS is stored frozen pending further processing.

Clarified Fetal Bovine Serum

Clarified FBS is semi-processed FBS, obtained as described above, that has been thawed, pooled and subjected to some level of filtration before being dispensed into final packaging. No further processes, treatment, additions or deletions are allowed. Clarified FBS is stored frozen pending further processing.

Sterile filtered Fetal Bovine Serum

Sterile filtered FBS is semi-processed FBS, obtained as described above, that has been thawed, pooled and subjected to filtration (usually through a series of membrane filters culminating in a sterile 0.1 micron filter) before being aseptically dispensed into its final packaging, labeling and placing on the market. No further processes, additions or deletions are allowed. Sterile filtered FBS is stored frozen.

Sterile filtered FBS may be treated using gamma irradiation or heat inactivation and additionally labeled to indicate the treatment method used.

Pre-Qualified or Screened Fetal Bovine Serum

This is sterile-filtered FBS that has been screened or qualified for suitability for a variety of specific applications. Examples may include Hybridoma screened, Stem Cell screened, Insect Cell screened, Low Endotoxin tested or Low IgG tested. Pre-Qualified or Screened FBS may be labeled according to the application for which it has been qualified.

Specialty Fetal Bovine Serum

This is semi-processed FBS or sterile filtered FBS that has been subjected to one or more modification processes, or that has been enhanced or altered in any way. Examples are Dialysed, Charcoal Stripped, IgG stripped, pH treated,

Performance Enhanced, Dehydrated and Reconstituted. Specialty FBS must be labeled in a manner that clearly identifies it as having been modified, enhanced or altered.

Other types of Bovine Serum

These products can be provided semi-processed, clarified or sterile filtered as described above. They can also be provided screened for suitability in a specific application (Pre-qualified or screened) or subjected to specific modification, treatment, enhancement or alteration (Specialty)

Neo-natal Bovine Calf Serum

This serum is defined as the liquid fraction of clotted blood derived from newborn calves that have not suckled from the mother cow. It is collected in abattoirs inspected by the competent authority of the country of origin. There are no deletions or additions (including preservatives) allowed.

Newborn Calf Serum

Newborn Bovine Calf Serum (NBCS) is defined as the liquid fraction of clotted blood derived from healthy, slaughtered bovine calves aged less than 20 days, deemed fit for human consumption through ante- and/or post- mortem inspection. It is collected in abattoirs inspected by the competent authority of the country of origin. There are no deletions or additions (including preservatives) allowed.

Calf Serum

Bovine Calf Serum (BCS) is defined as the liquid fraction of clotted blood derived from healthy, slaughtered bovine calves, aged from 20 days up to 12 months, deemed fit for human consumption by ante-and/or post- mortem inspection. It is collected in abattoirs inspected by the competent authority of the country of origin. There are no deletions or additions (including preservatives) allowed.

Donor Bovine Serum

Donor-sourced Bovine Serum (DBS) is defined as the liquid fraction of clotted blood derived from healthy cattle 12 months of age or older from controlled donor herds whose health status is confirmed by regular inspection by

competent, legally authorized veterinarians. There are no deletions or additions (including preservatives) allowed.

Adult Bovine Serum

Adult Bovine Serum (ABS) is defined as the liquid fraction of clotted blood derived from healthy, slaughtered cattle 12 months of age or older, deemed to be fit for human consumption by ante- and/or post- mortem inspection. It is collected in abattoirs inspected by the competent authority of the country of origin. There are no deletions or additions (including preservatives) allowed.

Adult Bovine Serum Analog

Adult Bovine Serum (ABSA) is defined as the product obtained by treatment of Adult Bovine Plasma by the addition of calcium and subsequent dialysis, or by freezing. Both these methods result in clotting of fibrin and its removal. The plasma must be derived from healthy, slaughtered cattle 12 months of age or older, deemed to be fit for human consumption by ante- and/or post- mortem inspection. It is collected in abattoirs inspected by the competent authority of the country of origin.

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