

Bovine Serum Albumin Emerges as Key Raw Material in Biotechnology Industry

Bovine

serum refers to blood plasma obtained from cattle that is used as a nutrient-rich

cell culture medium for supporting growth of cells in research laboratories. It is commonly used in cell culture and biotechnology research as it contains substances like growth factors, proteins, amino acids, vitamins and minerals essential for cellular growth and proliferation. Bovine serum is primarily used as a supplement to minimal basal growth media for various cellular studies.

Production and Global Trade of Bovine Serum Albumin

Bovine

Serum Albumin is

primarily extracted from cattle raised at industrial farms in parts of the United States, Australia, New Zealand and some European countries. After extraction from cattle, the serum undergoes sterile filtering and freeze drying to produce the final standardized serum product. The United States is one of

the largest producers and exporters of bovine serum catering primarily to research laboratories around the world. As per industry reports, the global trade of bovine serum was estimated to be over US\$250 million in the year 2020

with an annual growth rate of 8-10%. The Asia Pacific region has emerged as one

of the fastest growing importers led by countries like China, India, South Korea and Japan.

Bovine Serum Albumin Usage in Biopharmaceutical Industry

The biopharmaceutical industry has significantly increased the demand for bovine serum over the last decade for applications like cell line development,

cell banking and monoclonal antibody production. Advanced cell culture techniques have enabled large scale commercial production of therapeutics using

bovine serum supplemented media in bioreactors. Top selling recombinant therapeutic proteins produced using bovine serum include antibodies, enzymes,

hormones, vaccines and other biologics. It is estimated that over 60% of the

global bovine serum supply is utilized by biopharma companies for their upstream and downstream processes. New cell therapy and gene therapy approaches

also rely on this raw material.

Bovine Serum Albumin Applications in Regenerative Medicine

Regenerative medicine research involving stem cells, tissue engineering and

