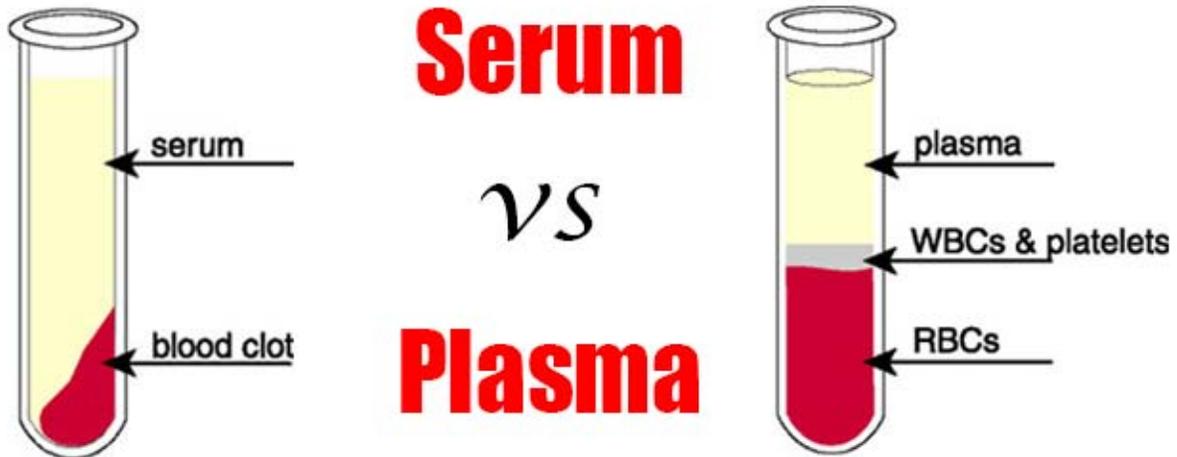


Difference between Serum and Plasma



Serum = Plasma – Clotting Factors

S.N.	Characteristics	Serum	Plasma
1.	Definition	Serum is the liquid part of the blood after the coagulation.	Plasma is a clear and yellowish fluid part of the blood.
2.	Composition	Serum is the water fluid from blood without the clotting factors.	Plasma is the blood fluid that contains blood clotting agents.
3.	Volume	Volume of serum is less in comparison to plasma.	Plasma is a clear yellow liquid which is 55% of total volume of blood.
4.	Isolation	Serum is acquired from the process of spinning after clotting.	Plasma is acquired from the process of spinning before clotting.
5.	Isolation Procedure	Serum is more difficult and time consuming to separate.	Plasma is easier and less time consuming to separate as compared with serum.
6.	Use of Anticoagulants	Serum does not need anticoagulants for separation.	Anticoagulants are necessary to separate plasma.
7.	Composition	Serum contains proteins, electrolytes, antibodies, antigens and hormones.	Plasma is considered as the medium of blood in which RBCs (Red Blood Cells), WBC (White Blood Cells) and other components of blood are suspended.

8.	Composition (Antibodies)	Serum contain antibodies and cross react with recipient antigen.	Plasma does not contain antibodies and not react with recipient antigen.
9.	Composition	Serum contains proteins like albumin and globulins.	Plasma contains the clotting factors and water.
10.	Fibrinogen	Absent	Present
11.	Composition (Water)	Serum contains 90% water.	Plasma contains 92-95% water.
12.	Storage	Serum can be stored at 2-6 degrees centigrade for several days.	Frozen plasma can be stored for up to a year.
13.	Density	Serum has a density of approximately 1.024 g/ml.	Plasma has a density of approximately 1025 kg/m ³ , or 1.025 g/ml.
14.	Arrangement	Cells are usually attached together by clot formation.	Cells are not attached together and suspended in plasma.
15.	Uses	Serum is the most preferred part of blood used in checking blood groups.	Plasma is delivered to the patients who lack blood cells.
16.	Uses	Serum is an important source of electrolytes and animal sera are used as anti-venom, anti-toxins, and vaccinations.	Plasma contains proteins that help in the transportation of material such as glucose and other dissolved nutrients through the blood.
17.	Uses	Serum is used for various diagnostic tests used for determining the levels of hCG, cholesterol, proteins, sugar, etc., in the blood.	Plasma aids in the maintenance of blood pressure and in the regulation of body temperature

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