

Immunoglobulin Comparison Chart

Lyophilized | Intravenous Liquid | Intravenous or Subcutaneous Liquid | Intravenous Liquid | Subcutaneous

	Carimune® NF	Flebogamma® 5% DIF	Flebogamma® 10% DIF	Gammagard® S/D IgA <1 µg/mL	Gammagard® S/D IgA <2.2 µg/mL	Gammagard® Liquid	Gammaplex®	Gamunex®-C	Hizentra®	Octagam®	Privigen®
Form	Lyophilized	Liquid	Liquid	Lyophilized	Lyophilized	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid
Route of Administration	Intravenous	Intravenous	Intravenous	Intravenous	Intravenous	Intravenous or Subcutaneous	Intravenous	Intravenous or Subcutaneous	Subcutaneous	Intravenous	Intravenous
Manufacturer	CSL Behring	Grifols	Grifols	Baxter Healthcare	Baxter Healthcare	Baxter Healthcare	Bio Products Laboratory	Talecris Biotherapeutics	CSL Behring	Octapharma	CSL Behring
FDA Indication	PIDD, ITP	PIDD	PIDD	PIDD, ITP, CLL, Kawasaki Disease	PIDD, ITP, CLL, Kawasaki Disease	PIDD	PIDD	PIDD, ITP, CIDP	PIDD	PIDD	PIDD, ITP
pH (after reconstitution)	6.6 ± 0.2	5 – 6	5 – 6	6.8 ± 0.4	6.8 ± 0.4	4.6 – 5.1	4.8 – 5	4 – 4.5	4.6 – 5.2	5 – 6	4.6 – 5
Concentration	3, 6, 9 or 12%	5%	10%	5% (for 10%, use half of supplied diluent)	5% (for 10%, use half of supplied diluent)	10%	5%	10%	20%	5%	10%
IgA Content	720 µg/mL	<50 µg/mL	<100 µg/mL	<1 µg/mL	≤2.2 µg/mL	37 µg/ml	<10 µg/mL	46 µg /ml	≤50 µg/ml	≤2 µg/ml	<25 µg/ml
% IgG	≥96%	≥97%	≥97%	≥90%	≥90%	≥98%	>95%	≥98%	≥98%	≥96%	≥98%
Na Content (at 5% concentration)	<20 mg NaCl/gm protein	<3.2 mmol/L	Trace amounts	0.85% with 5%	0.85% with 5%	Non-detectable	0.3 g NaCl	1.3 mmol/L	Trace	<30 mmol/L	Trace
Diluent	Sterile Water, 5% Dextrose or 0.9% NaCl	N/A	N/A	Sterile Water 96 mL for 5 gm 5% 192 mL for 10 gm 5%	Sterile Water	N/A	N/A	N/A	N/A	N/A	N/A
Osmolality (mOsm/L)	Sterile water: 192-768 (3-12%) 5% dextrose: 444-1020 (3-12%) 0.9% NaCl: 498-1074 (3-12%)	240 – 370	240 – 370	636 (5%) 1250 (10%)	636 (5%) 1250 (10%)	240-300	≥240 (typically 420 – 500)	258	N/A	310-380	320
Initial Infusion Rate (consult package insert for full prescribing information)	See calculations in package insert	Initial rate of 0.01 mL/kg body weight/min. If tolerated during first 30 minutes, can be gradually increased to a max of 0.1 mL/kg/min.	0.01 mL/kg/min (1 mg/kg/min). If tolerated, increase to 0.08 mL/kg/min (8 mg/kg/min).	5 solution%: 0.5 mL/kg/hr (0.8 mg/kg/min). Can gradually increase every 30 minutes to a rate of 4 mL/kg/hr. 10% solution: If 4 mL/kg/hr is tolerated, can increase to 10% solution starting at 0.5 mL/kg/hr to a max of 8mL/kg/hr.	5% solution: Start at 0.5 mL/kg/hr. 10% solution: Patients who tolerate a 5% solution up to 4 mL/kg/hr can be infused w/ a 10% solution starting at 0.5 mL/kg/hr.	Intravenous Initial rate of 0.5 mL/kg/hr. When well tolerated, can be gradually increased every 30 minutes to a max rate of 5 mL/kg/hr. Subcutaneous ≥40 kg body weight: 30 mL/site at 20 mL/hr/site. <40kg: 20 mL/site at 15 mL/hr/site.	0.5 mg/kg/min (0.01 mL/kg/min for 15 minutes, then gradually increase to 4mg/kg/min. (0.08 mL/kg/min).	Intravenous ITP: 1 mg/kg/min. PIDD: 1 mg/kg/min. CIDP: 2 mg/kg/min. Subcutaneous PIDD: 20 mL/hr/site.	Not for intravenous administration. Avoid injection into blood vessel. Injection sites: abdomen, thighs, upper arms, and/or lateral hip. Manufacturer recommends 15 mL volume per infusion site at a max rate of 50 mL/hr/site by infusion pump.	Initial rate of 0.01 mL/kg/min. Max rate of 0.07mL/kg/min.	PIDD: Initial rate of 0.005 mL/kg/min. If tolerated, increase gradually to 0.08 mL/kg/min. ITP: Initial rate of 0.005 mL/kg/min. If tolerated, increase gradually to 0.04 mL/kg/min
Sugar Content	1.67 gm sucrose	5 g D-sorbitol (as stabilizer) in 100 mL of water for injection	5 g D-sorbitol (as stabilizer) in 100 mL of water for injection	20 mg/mL glucose with 5%	20 mg/mL glucose with 5%	No added sugars	5 g D-sorbitol in 100 mL of buffer solution	No added sugars	No added sugars	100 mg/ml maltose ¹	No added sugars
Shelf Life	24 months	24 months	24 months	24 months	24 months	36 months (refrigerated) 12 months (at room temperature within the first 24 months of date of manufacture)	24 months (room temperature)	36 months (refrigerated) 6 months (at room temperature for up to 6 months anytime during 36 month shelf life)	18 months (room temperature)	24 months	36 months (room temperature)
Storage Requirements	Room temperature: up to 30°C (86°F).	Room temperature: 2–25°C (36 to 77°F). Do not freeze.	Room temperature: up to 25°C (77°F). Do not freeze.	Room temperature: up to 25°C (77°F). Freezing should be avoided to prevent the diluent bottle from breaking.	Room temperature: up to 25°C (77°F). Freezing should be avoided to prevent the diluent bottle from breaking.	Refrigeration: 2–8°C (36–46°F). Room temperature: up to 25°C (77°F) Do not freeze.	Room temperature: 2–25°C (36–77°F). Do not freeze.	Refrigeration: 2–8°C (36–46°F) Room temperature: up to 25°C (77°F). Do not freeze.	Room temperature: up to 25°C (77°F). Do not freeze. Protect from light.	Room temperature: 2–25°C (36–77°F). Do not freeze.	Room temperature: up to 25°C (77°F). Do not freeze. Protect from light.
Flushing Compatibility (IV only)	Saline or dextrose	Saline or dextrose	Saline or dextrose	Saline or dextrose	Saline or dextrose	Saline or dextrose	Saline or dextrose	Dextrose (incompatible with saline)	N/A	Saline or Dextrose	Saline or Dextrose



¹ Some types of blood glucose testing systems (for example, those based on the glucose dehydrogenase pyrroloquinolinequinone [GDH-PQQ] or glucose-dye-oxidoreductase methods) falsely interpret the maltose contained in Octagam liquid as glucose. This has resulted in falsely elevated glucose readings and, consequently, in the inappropriate administration of insulin, resulting in life-threatening hypoglycemia. Also, cases of true hypoglycemia may go untreated if the hypoglycemic state is masked by falsely elevated glucose readings. Accordingly, when administering Octagam liquid, the measurement of blood glucose must be done with a glucose-specific method. The product information of the blood glucose testing system, including that of the test strips, should be carefully reviewed to determine if the system is appropriate for use with maltose-containing parenteral products. If any uncertainty exists, contact the manufacturer of the testing system to determine if the system is appropriate for use with maltose-containing parenteral products.

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