










		Tonicity	Osm mosm/L	Na meq/L	Cl meq/L	K meq/L	Buffer
Plasma		✓	290	140	103	4	Bicarbonate (HCO ₃)
Plasma-Lyte		✓	294	140	98	5	Gluconate, acetate
0.45% Saline (1/2 NS)		↓	155	77	77	0	 NephSim www.nephsim.com
0.9% Saline (NS = normal saline)		✓	308	154	154	0	
2% Saline		↑	684	342	342	0	
3% Saline		↑	1027	513	513	0	
5% Dextrose (DSW)		↓	253	0	0	0	
Ringer's Lactate		✓	273	130	109	4	
DSW + 150 meq NaHCO ₃		✓	480	150	0	0	HCO ₃
1/2 NS + 75 meq NaHCO ₃		✓	293	161	77	0	HCO ₃

 = isotonic

Tonicity ≠ **Osmolarity**
Tonicity = [effective osmoles]; **Osmolarity (Osm)** = [effective osmoles] + [ineffective osmoles]
 Dextrose is an ineffective osmole!