

Solubility - grams per 100 milliliters of water (g/100 ml)

as an element/complex, not as an evaporative salt and among other elements or complexes.

Substance	Formula	Solubility g/100 ml water
Zinc chloride	ZnCl ₂	395
Iron (III) perchlorate	Fe (ClO ₄) ₃	368
Calcium permanganate	Ca (MnO ₄) ₂	338
Potassium nitrite	KNO ₂	306
Potassium acetate	KC ₂ H ₃ O ₂	256
Sodium perchlorate	NaClO ₄	201
Calcium perchlorate	Ca (ClO ₄) ₂	188
Potassium thiosulfate	K ₂ S ₂ O ₃	155
Potassium hydrogen phosphate	K ₂ HPO ₄	150
Calcium bromide	CaBr ₂	143
Manganese (II) nitrate	Mn (NO ₃) ₂	139
Iron (III) nitrate	Fe (NO ₃) ₃ ·9H ₂ O	138
Calcium nitrate tetrahydrate	Ca (NO ₃) ₂ ·4H ₂ O	129
Calcium nitrate	Ca (NO ₃) ₂	121
Potassium hydroxide	KOH	112
Potassium carbonate	K ₂ CO ₃	111
Sodium hydroxide	NaOH	109
Urea	CO(NH ₂) ₂	108
Potassium phosphate	K ₃ PO ₄	92
Iron (III) chloride	FeCl ₃ ·6H ₂ O	92
Sodium permanganate	NaMnO ₄	90
Sodium nitrate	NaNO ₃	88
Monosodium phosphate	NaH ₂ PO ₄	87
Calcium nitrite	Ca (NO ₂) ₂ ·4H ₂ O	85
Sodium nitrite	NaNO ₂	81
Calcium chloride	CaCl ₂	75
Manganese (II) chloride	MnCl ₂	74
Sodium thiosulfate	Na ₂ S ₂ O ₃	73
Hydrogen Chloride	HCl	70
Magnesium nitrate	Mg (NO ₃) ₂	70
Sodium metabisulfite	Na ₂ S ₂ O ₅	65
Manganese (II) sulfate	MnSO ₄	63
Iron (II) chloride	FeCl ₂	63
Magnesium chloride	MgCl ₂	55
Zinc sulfate	ZnSO ₄	54
Magnesium acetate	Mg(C ₂ H ₃ O ₂) ₂	53
Magnesium thiosulfate	MgS ₂ O ₃	50
Magnesium perchlorate	Mg (ClO ₄) ₂	50

Potassium hydrogen sulfate	KHSO ₄	49
Sodium tetraphenylborate	NaB(C ₆ H ₅) ₄	47
Sodium acetate	NaC ₂ H ₃ O ₂	46
Potassium oxalate	K ₂ C ₂ O ₄	36
Sodium chloride	NaCl	36
Magnesium sulfate	MgSO ₄	35
Calcium acetate	Ca(C ₂ H ₃ O ₂) ₂	35
Potassium chloride	KCl	34
Potassium hydrogen carbonate	KHCO ₃	34
Zinc permanganate	Zn (MnO ₄) ₂	33
Potassium nitrate	KNO ₃	32
Zinc acetate	Zn(C ₂ H ₃ O ₂) ₂	30
Iron (II) sulfate	FeSO ₄	29
Sodium sulfite	Na ₂ SO ₃	27
Sodium metaborate	NaBO ₂	25
Potassium dihydrogen phosphate	KH ₂ PO ₄	23
Sodium carbonate	Na ₂ CO ₃	22
Sodium sulfate	Na ₂ SO ₄	20
Calcium bicarbonate	Ca (HCO ₃) ₂	17
Oxalic acid	H ₂ C ₂ O ₄ ·2H ₂ O	13
Sodium phosphate	Na ₃ PO ₄	12
Potassium sulfate	K ₂ SO ₄	11
Sodium hydrogen carbonate	NaHCO ₃	10
Sulfur dioxide	SO ₂	9
Potassium chlorate	KClO ₃	7
Potassium permanganate	KMnO ₄	6
Potassium persulfate	K ₂ S ₂ O ₈	5
Sodium oxalate	Na ₂ C ₂ O ₄	3
Sodium pyrophosphate at 0 deg. C	Na ₄ P ₂ O ₇	2
Monocalcium phosphate	Ca(H ₂ PO ₄) ₂	2
Potassium perchlorate	KClO ₄	2
Magnesium sulfite	MgSO ₃ ·6H ₂ O	0.52
Hydrogen Sulfide	H ₂ S	0.33
Calcium sulfate	CaSO ₄ ·2H ₂ O	0.255
Calcium hydroxide	Ca (OH) ₂	0.173
Zinc sulfite	ZnSO ₃ ·2H ₂ O	0.16
Magnesium oxalate	MgC ₂ O ₄	0.104
Calcium citrate	Ca ₃ (C ₆ H ₅ O ₇) ₂	0.095
Magnesium carbonate	MgCO ₃	0.039
Manganese (II) oxalate	MnC ₂ O ₄ ·2H ₂ O	0.028
Iron (II) oxalate	FeC ₂ O ₄ ·2H ₂ O	0.008
Dicalcium phosphate	CaHPO ₄	0.004303
Calcium phosphate	Ca ₃ (PO ₄) ₂	0.002
Magnesium hydroxide	Mg (OH) ₂	0.0009628

Calcium carbonate (Aragonite)	CaCO ₃ -Aragonite	0.0007753
Calcium oxalate	CaC ₂ O ₄	0.00067
Calcium carbonate (Calcite)	CaCO ₃ -Calcite	0.000617
Manganese (II) hydroxide	Mn (OH) ₂	0.0003221
Magnesium phosphate	Mg ₃ (PO ₄) ₂	0.0002588
Iron (II) carbonate	FeCO ₃	0.00006554
Iron (II) hydroxide	Fe (OH) ₂	0.00005255
Manganese (II) carbonate	MnCO ₃	0.00004877
Zinc carbonate	ZnCO ₃	0.00004692
Iron (III) hydroxide	Fe (OH) ₃	0.000000002
Zinc oxalate	ZnC ₂ O ₄ .2H ₂ O	0.000000014

The solubility of nutrients is determined by the molecular properties (e.g., polarity) of the nutrients. Although dissolution is a necessary step for nutrients to be absorbed, absorbance depends on more than the solubility of the nutrients including bio-films. Certain substances can interfere with the absorbance of some nutrients even if the nutrients are dissolved; other substances can enhance nutrient absorption. All of these processes are governed by fundamental chemical properties and principles, such as polarity, molecular structure, intermolecular interactions, thermodynamics, and equilibrium.

WaterSOLV™ Products are based on acetates, glycolates and sequestration along with addressing biology and oxygen.