

Hormone	Product Name	Product Number	Function in Plant Tissue Culture
Auxins	Indole-3-Acetic Acid Indole-3-Butyric Acid Indole-3-Butyric Acid, Potassium Salt α -Naphthaleneacetic Acid 2,4-Dichlorophenoxyacetic Acid p-Chlorophenoxyacetic acid Picloram Dicamba	I 885 I538 I530 N600 D299 C213 P717 D159	Adventitious root formation (high concen) Adventitious shoot formation (low concen) Induction of somatic embryos Cell Division Callus formation and growth Inhibition of axillary buds Inhibition of root elongation
Cytokinins	6-Benzylaminopurine 6- γ,γ -Dimethylallylaminopurine (2iP) Kinetin Thidiazuron (TDZ) N-(2-chloro-4-pyridyl)-N'-Phenylurea Zeatin Zeatin Riboside	B800 D525 K750 T888 C279 Z125 Z899	Adventitious shoot formation Inhibition of root formation Promotes cell division Modulates callus initiation and growth Stimulation of axillary's bud breaking and growth Inhibition of shoot elongation Inhibition of leaf senescence
Gibberellins	Gibberellic Acid	G500	Stimulates shoot elongation Release seeds, embryos, and apical buds from dormancy Inhibits adventitious root formation Paclbutrazol and ancymidol inhibit gibberellin synthesis thus resulting in shorter shoots, and promoting tuber, corm, and bulb formation.
Absciscic Acid	Absciscic Acid	A102	Stimulates bulb and tuber formation Stimulates the maturation of embryos Promotes the start of dormancy
Polyamines	Putrescine Spermidine	P733 S837	Promotes adventitious root formation Promotes somatic embryogenesis Promotes shoot formation

**PLANT GROWTH REGULATORS
CONCENTRATION/MOLARITY (μM) CONVERSIONS AND CHEMICAL
SPECIFICATIONS**

Product Number	A 102	A 123	B 800	C 213	C 283	C 207	D 525	D 159
Growth Regulator	ABA	Ancymidol	BA	4-CPA	t-Cinnamic Acid	CCC	2iP	Dicamba
Mol. Weight	264.3	256.3	225.3	186.6	148.2	158.1	203.2	221.0
CAS Number	1437545-2	12771-68-5	1214-39-7	122-88-3	140-10-3	999-81-5	2365-40-4	1918-00-9
0.1 mg/L	0.38	0.39	0.44	0.54	0.68	0.63	0.49	0.45
0.2	0.76	0.78	0.88	1.07	1.35	1.27	0.98	0.90
0.3	1.14	1.17	1.33	1.61	2.02	1.90	1.48	1.36
0.4	1.51	1.56	1.78	2.15	2.7	2.53	1.97	1.81
0.5	1.89	1.95	2.22	2.68	3.37	3.16	2.46	2.26
0.6	2.27	2.34	2.66	3.22	4.05	3.80	2.95	2.71
0.7	2.65	2.73	3.11	3.75	4.72	4.43	3.44	3.17
0.8	3.03	3.12	3.55	4.29	5.40	5.06	3.94	3.62
0.9	3.41	3.51	3.99	4.82	6.07	5.70	4.43	4.07
1.0	3.78	3.90	4.44	5.36	6.74	6.33	4.92	4.52
2.0	7.57	7.80	8.87	10.72	13.50	12.65	9.84	9.05
5.0	18.92	19.51	22.19	26.80	33.74	31.63	24.61	22.62
10.0	37.84	39.02	44.38	53.59	67.48	63.25	49.21	45.25
20.0	75.67	78.03	89.77	107.18	134.95	126.5	78.38	90.50
Preparation and Storage								
Solvent	1 N KOH	DMSO	1 N KOH	EtOH	1N KOH	Water	1N KOH	EtOH
Diluent	Water	Water	Water	Water	Water	Water	Water	Water
Powder Storage	-20 to 0 C	0 to 5 C	RT	RT	RT	RT	-20 to 0 C	0 to 5 C
Liquid Storage	-20 to 0 C	-20 to 0 C	0-5 C	0-5 C	0-5 C	0-5 C	-20 to 0 C	0 to 5 C
Sterilization	CA/F	CA/F	CA/F	CA	CA	CA	CA	CA
Working Concentration (mg/L)	0.1- 10.0	1.0-10.0	0.1-5.0	0.1-10.0	0.1-10.0	Up to 500	1.0-30.0	0.01 to 10.0

CA = Coautoclave with other media components

F = Filter Sterilize

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Product Number	D 299	G 500	I 885	I 538	I 560	K 750	M494	N600
Growth Regulator	2,4-D	GA ₃	IAA	IBA	IBA K-Salt	Kinetin	Maleic Hydrazide	NAA
Mol. Weight	221.0	346.4	175.2	203.2	241.3	215.2	112.1	186.2
CAS Number	94-75-7	77-06-5	87-51-4	133-32-4	60096-23-3	525-79-1	123-33-1	86-87-3
0.1 mg/L	0.45	0.29	0.57	0.49	0.14	0.46	0.89	0.54
0.2	0.90	0.58	1.14	0.98	0.83	0.93	1.78	1.07
0.3	1.36	0.87	1.71	1.48	1.24	1.39	2.68	1.61
0.4	1.81	1.15	2.28	1.97	1.65	1.86	3.57	2.15
0.5	2.26	1.44	2.85	2.46	2.07	2.32	4.46	2.69
0.6	2.72	1.73	3.42	2.95	2.49	2.79	5.35	3.22
0.7	3.17	2.02	3.99	3.44	2.90	3.25	6.24	3.76
0.8	3.62	2.31	4.57	3.94	3.32	3.72	7.14	4.30
0.9	4.07	2.60	5.14	4.43	3.73	4.18	8.03	4.83
1.0	4.52	2.89	5.71	4.90	4.14	4.65	8.92	5.37
2.0	9.05	5.77	11.42	9.80	8.29	9.29	17.84	10.74
5.0	22.62	14.43	28.54	24.60	20.72	23.23	44.60	26.85
10.0	45.25	28.89	57.08	49.00	41.44	46.47	89.06	53.71
20.0	90.50	57.74	114.16	98.00	82.88	92.94	178.41	107.41
Preparation and Storage								
Solvent	EtOH/1 N NaOH	EtOH	EtOH/1 N NaOH	EtOH/1 N NaOH	WATER	1 N NaOH	1 N NaOH	1 N NaOH
Diluent	Water	Water	Water	Water	NA	Water	Water	Water
Powder Storage	RT	RT	- 0 C	0-5 C	0-5 C	- 0 C	RT	RT
Liquid Storage	0-5 C	0-5 C	- 0 C	- 0 C	- 0 C	- 0 C	0-5 C	0-5 C
Sterilization	CA	CA/F	CA/F	CA/F	CA/F	CA/F	F	CA
Working Concentration (mg/L)	0.01-5.0	0.01-5.0	0.01-3.0	0.1-10.0	0.1-10.0	0.1-5.0	0.01-10.0	0.1-10.0

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Product Number	P717	P694	S746	T888	Z125	Z899
Growth Regulator	Picloram	Phloroglucinol	Succinic Acid	Thidiazuron	Zeatin	Zeatin Riboside
Mol. Weight	241.5	126.1	160.2	220.2	219.2	351.4
CAS Number	1918-02-1	6009-90-7	1596-84-5	51707-55-2	1637-39-4	6025-53-2
0.1 mg/L	0.41	0.79	0.62	0.45	0.46	0.28
0.2	0.83	1.59	1.25	0.91	0.91	0.57
0.3	1.38	2.38	1.87	1.36	1.36	0.85
0.4	1.66	3.17	2.50	1.82	1.82	1.14
0.5	2.07	3.97	3.12	2.27	2.28	1.42
0.6	2.48	4.76	3.75	2.72	2.73	1.71
0.7	2.90	5.55	4.37	3.18	3.19	1.99
0.8	3.31	6.34	4.99	3.63	3.65	2.28
0.9	3.73	7.14	5.62	4.09	4.11	2.56
1.0	4.14	7.93	6.24	4.54	4.56	2.85
2.0	8.28	15.86	12.48	9.08	9.12	5.69
5.0	20.70	39.65	31.21	22.71	22.81	14.23
10.0	41.41	79.30	62.42	45.41	45.62	28.46
20.0	82.82	158.60	124.84	90.82	91.24	56.92
Solvent	DMSO	Water	Water	DMSO	1 N NaOH	1 N NaOH
Diluent	Water	NA	NA	Water	Water	Water
Powder Storage	RT	RT	0-5 C	RT	- 0 C	- 0 C
Liquid Storage	0-5 C	0-5 C	0-5 C	0-5 C	- 0 C	- 0 C
Sterilization	CA	CA/F	CA/F	CA/F	CA/F	F
Working Concentration (mg/L)	0.01-10.0	up to 162	0.1-10.0	0.001-0.05	0.01-5.0	0.01-5.0

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