

SELECTED RATES

All rates listed are subject to change due to many variables including the quality of the stock plant and cuttings, juvenility of the cuttings, time of the year, specific varieties, and conditions in the propagation area. Data is compiled from many sources including the Rhizopon Rooting Guide, grower trials and other published information.



DRY DIP METHOD:

USE Rhizopon AA #1, #2 or #3 Dry Powder Rooting Hormones

Woody cuttings often need to have wound cuts made at the basal end before treatment. Herbaceous cuttings are not wounded.

DRY DIP METHOD:

Dip the basal end of cuttings in rooting powder then plant in media.

Rhizopon AA #1 (0.1) PINK,
Lowest concentration

House, foliage, tropical and hardy ornamental plants. Herbaceous, leaf, greenwood and softwood cuttings.

Rhizopon AA #2 (0.3) GREEN,
Intermediate concentration

House, foliage, tropical and hardy ornamental plants. Herbaceous, greenwood, softwood and hardwood cuttings.

**Rhizopon AA #3 (0.8) GRAY
WHITE,** Highest concentration

More difficult to root woody ornamental plants. Softwood & hardwood cuttings

After the plant name is the product number for Rhizopon AA #1, #2 or #3 Dry Powder Rooting Hormones

Abelia	#1	Dracaena	#1	Oleander	#2
Acanthopanax	#3	Dutchman's Pipe	#1	Olive	#3
African Violet	#1	Elder	#1 or #2	Orange, Sour	#3
Ageratum	#1	Escallonia	#3	Orixa	#1
Andromeda	#1	Euonymus	#2	Osage Orange	#1
Apple, Malus	#2 or #3	False Arborvitae	#2	Osmanthus	#2
Arborvitae	#2 or #3	Firethorne	#1 or #2	Pachysandra	#2 or #3
Arbutus	#3	Flowering Cherry	#1	Pea Shrub	#1
Ardisia	#2	Flowering Quince	#3	Pear, Rootstocks	#3
Azalea Var.	#1, #2 or #3	Fontanesia	#1	Pecan	#3
Barberry	#1	Forsythia	#1	Penstemon	#1
Bayberry	#1	Franklinia	#2	Periwinkle	#2
Beauty Bush	#3	Fringe Tree	#2	Petunia	#2 or #3
Beauty Berry	#1	Fuchsia	#1	Philodendron	#1
Beech	#2	Gardenia	#1, #2 or #3	Phlox	#1
Begonia	#1	Geranium	#1	Photinia	#3
Birch	#3	Germander	#2 or #3	Pine Var.	#2 or #3
Bittersweet	#3	Ginkgo	#2	Poinsettia	#1
Blackberry	#1	Golden Chain	#2	Poplar	#1
Bluebeard	#1	Grape	#3	Prickly Pear Cactus	#1
Blueberry	#1 or #2	Hawthorn	#3	Privet	#3
Bougainvillea	#3	Hazelnut	#1 or #2	Raspberry	#1
Boxwood	#3	Heath	#3	Retinospora	#3
Broom	#1 or #2	Heather	#3	Rhododendron var.	#3
Butterfly Bush	#1	Hemlock	#2 or #3	Rose	#1 or #2 or #3
Camellia	#3	Hibiscus	#2 or #3	Russian Olive	#3
Candytuft	#1	Holly, Jap.	#2	Sage	#1
Carnation	#3	Holly, Am.	#3	Sequoia	#2
Catalpa	#3	Honeysuckle	#2	Snapdragon	#1
Chaste Tree	#3	Hydrangea	#2	Snow Berry	#1
Chestnut	#3	Jetbead	#1	Sourwood	#3
Chokeberry	#2 or #3	Juniper Var.	#2 or #3	Speedwell	#1
Chrysanthemum	#2	Kerria	#1	Spiraea	#1
Cinquefoil	#2	Knotwood	#3	Springscent	#2
Clematis	#2 or #3	Laburnocytisus	#1 or #2	Spruce Var.	#2
Clerodendron	#1	Lantana	#1	St. Johnswort	#1
Clockvine	#1	Laurel	#3	Stevia	#1
Coleus	#1	Lavender	#2	Stewartia	#1
Cotoneaster	#3	Leucothoe	#2	Sweet Leaf	#1
Crab Apple	#2 or #3	Lilac	#3	Trumpet Creeper	#1
Cape Myrtle	#1	Lily Scales	#1 or #2	Tulip Tree	#3
Crassula	#1	Linden	#1	Umbrella Pine	#3
Creeper	#1	Locust	#3	Verbena	#1
Croton	#1	Magnolia	#2 or #3	Viburnum	#1
Cryptomeria	#3	Manzanita	#3	W axmyrtle	#1
Currant	#1	Maple, Jap.	#3	W eigela	#1
Dahlia	#2	Matrimony Vine	#3	W illow	#1
Daphne	#1 or #2	Melastoma	#1	W intergreen	#2
Deutzia	#1	Mock Orange	#1	W isteria	#2
Dew Berry	#1	Mulberry	#1	W itch Hazel	#2
Dogwood	#3	Ninebark	#3	Y ellow W ood	#2
Douglas Fir	#3	Norway Spruce	#1	Y ew Var.	#3
Dove Tree	#1	Oak	#3	Zelkova	#2

Converting Rates

The rates for Rooting Solutions are listed in ppm (parts per million) IBA as published in books on plant propagation and technical articles. When **IBA** (indole-3-butyric acid) is specified as the product to use then use **Rhizopon AA Water Soluble Tablets** and **Hortus IBA Water Soluble Salts**. These rate are typically used to make up Rooting Solutions used by the Spray Drip Down, Total Immerse, Basal Quick Dip and Basal Long Soak Methods.

The following table converts ppm IBA to Tablets/liter water and gram of Salts/liter water

- 1 Tablet of Rhizopon AA Water Soluble Tablets (contains 50 mg IBA) which yields 50 ppm when dissolved in 1 liter of water.
- 1/4 gram (0.25 grams) of Hortus IBA Water Soluble Salts (contains 50 mg IBA) yields 50 ppm IBA when dissolved in 1 liter of water.
- 50 ppm IBA ⇒ 1 tablet ⇒ 0.25 Grams of Salts
- 1 Gal = 3.8 Liters
- Measure Salts by weight not by scoop (sold by weight not volume)
- Above 10 Tablets per liter you can use an electric hand blender to assist mixing.
- Above 1000 ppm IBA the Tablets are not recommended: Use the Salts.

Parts per million IBA (ppm IBA)	<u>RHIZOPON AA WATER SOLUBLE TABLETS</u> # Tablets/liter of water	<u>HORTUS IBA WATER SOLUBLE SALTS</u>	
		LITERS # grams of Salts/liter of water	GALLONS # grams of Salts/gallon of water 1 gal = 3.8 liters
50 ppm IBA	1 Tablets	0.25 grams of Salts per Ltr	.95 grams Salts per gal
100	2	0.5 gm	1.9 gm
200	4	1.0 gm	3.3 gm
250	5	1.25 gm	4.75 gm
300	6	1.5 gm	17.1 gm
400	8	2.0 gm	7.6 gm
500	10	2.5 gm	9.5 gm
750	15	3.75 gm	14.25 gm
1000	20	5.0 gm	19 gm
1500	USE THE SALTS	7.5 gm	28.5 gm
2000		10.0 gm	38 gm
2500		12.5 gm	43.75 gm
3000		15.0 gm	57 gm
4000		20.0 gm	76 gm
5000		25.0 gm	95 gm
6000		30.0 gm	114 gm
7000		35.0 gm	133 gm
8000		40.0 gm	152 gm
9000		45.0 gm	171 gm
10,000		50.0 gm	190 gm

TRIAL RATES FOR ROOTING SOLUTIONS

For use by the Spray Drip Down, Total Immerse, Basal Quick Dip & Basal Long Soak Methods. Use Hortus IBA Water Soluble Salts and Rhizopon AA Water Soluble Tablets rooting solutions. Above 500 ppm IBA use Hortus IBA Water Soluble Salts

	Hortus IBA Water Soluble Salts (ppm IBA)	Rhizopon AA Water Soluble Tablets (tab/liter water)
Spray Drip Down & Total Immerse Methods		
Soft perennial cuttings Annual cuttings	50-500	1-10
Herbaceous cuttings Woody ornamental cuttings	500-1500 750-1500	10 or Use Salts Use Salts
Acer	1000-1500	Use Salts
Cotoneaster	500-750	10-15
Diervilla, <i>panicuata</i>	500-750	10-15
Hydrangea	500-750	10-15
Juniperus, <i>horizontalis</i>	1000-1500	Use Salts
Physocarpus, <i>opulifolius</i>	1000-1500	Use Salts
Rhus	500-750	10-15
Rosa, <i>orn. varieties</i>	1000-1500	Use Salts
Spirea, <i>japonica</i>	500-750	10-15
Syringa	500-750	10-15
Thuja	1500-2000	Use Salts
Viburnum	1000-1500	Use Salts
Weigela	1000-1500	Use Salts
Basal Quick Dip Method		
Herbaceous cuttings, tropical plants, house plants, roses, etc	150-500	3-10
Chrysanthemum	100-500	2-10
Softwood cuttings	500-1000	10 or Use Salts
Hardwood cuttings	500-2000	10 or Use Salts
Difficult to root cuttings	5000-10,000	Use Salts
Basal Long Soak Method		
Easier to root and most difficult to root plant cuttings	50-150	1-3

SPRAY DRIP DOWN & TOTAL IMMERSE METHODS: **USE Rhizopon AA Water Soluble Tablets or Hortus IBA Water Soluble Salts**



Spray Drip Down Method:

Plant in media then spray the leaves of the cuttings with rooting solution until the solution drips down



Total Immerse Method:

Dip the whole cuttings into the rooting solution then plant in media.

Leafy herbaceous cuttings, Chrysanthemum, Plumbago, Ivy, Clematis, Delphinium, Lavender, Ficus, Potted Rose Bushes, etc: 50-1500 ppm IBA as Hortus IBA Water Soluble Salts or 1-30 tablets per liter water using Rhizopon AA Water Soluble Tablets

Leafy softwood cuttings, Buddleia (Butterfly Bush), Hydrangea, Pieris, Hedera (Ivy), etc.: 200-2000 ppm IBA as Hortus IBA Water Soluble Salts or 4-40 tablets per liter water using Rhizopon AA Water Soluble Tablets

Leafy hardwood cuttings, Conifers, etc.: 500-2500 ppm IBA as Hortus IBA Water Soluble Salts

Typical herbaceous. For cuttings taken in the growing season or all year in the greenhouse

ABUTILON	750	IBERIS	1000
ACHILLEA	up to 1000	ITEA- Little Henry	1000
ACTINIDIA		KERRIA	1000
-Arctic Beauty	1000	LAMIASTRUM	
AJUGA	up to 1000	-Herman's Pride	1000
AMSONIA	1500	LAMIUM	up to 1000
ANISODONTEA		LAVANDULA	1000
-Tara'sPink	750	LEPTOSPERMUM	500
ANTENNARIA	up to 750	LINARIA 500	
ANTHEMIS	1000	LITHODORA	2000
ARABIS -Variegata	500	LONICERA	1000
ARCTOSTAPHYLOS	500	LYCHNIS	1000
ARMERIA	1000	MARJORAM	
ARTEMESIA	up to 500	Compactum	500
BAPTISIA	3500	MELISSA	up to 500
BASIL Kasar	500	MENTHA	500
BUDDLEIA	1000	NEPETA	500
CALAMINTHA		OENANTHE	500
Variegata	500	ORIGANUM	500-750
CALLICARPA	500	PAXISTIMA canbyi	1000
CAMPANULA	500-1000	PENSTEMON	500
CARYOPTERIS	1000	PERSICARIA	up to 1000
CEANOTHUS	500	PHLOX	1000
CERATOSTIGMA	1500	PHYGELIUS	750
CHRYSOGONUM	750	POINTSETTA	500-1000
CISTUS	750	POLEMONIUM	
CLEMATIS	1000	-Bressingham Purple	1000
CLETHRA	1000	PRUNELLA	
COLEONEMA	750	-Loveliness	750
CONVOLVULUS	750	ROSA	
COREOPSIS	500-1000	miniature pot rose	500
CORREA	500	ROSMARINUS	500
COSMOS	1000	RUDBECKIA	750
COTONEASTER		RUELLIA	1000
Coral Beauty	500	SALVIA	500-1000
DELOSPERMA	1000	SANTOLINA	500
ERIGERON	750-1000	SAPONARIA	1000
ERODIUM		SAXIFRAGA	750
Dark Eyes	750	SCABIOSA	1000
ERYSIMUM	750	SILENE	500
ESCALLONIA		SOLLYA	
Compacta	500	Boddys Choice	750
EUPATORIUM	500	SPILANTHES	500
EUPHORBIA	1000	SPIRAEA	1000
GAILLARDIA	500	SPIRAEA- Gold Flame,	
GALIUM		Magic Carpet, Neon Flash	
Sweet Woodruff	1500		4000
GERANIUM	1000	STACHYS	1000
GEUM rivale	1000	STEVIA-rebaudiana500	
GYPHOPHILA		TEUCRIUM	1000
-Viette's Dwarf	1000	VERBASCUM	1000
HEDERA	1000	VERBENA	750
HELENIUM	500	VINCA	1000
HELIANTHEMUM	2000	VIOLA	1500
HELIANTHUS	1000	VITEX	1000
HELICHRYSUM	500-1000	WALDSTEINIA	1000
HELIOPSIS	1000	WEIGELA	1000
HYPERICUM	1000	WESTRINGIA	750
HYSSOP			
Pink Delight	500		

Typical ornamental plants. For cuttings taken in the growing season

ACER	750	RHUS	750
COTONESTER	1500	ROSA,	
DIERVILLA		-orn. varieties	1500
-Panicuata	750	SPIREA-japonica	750
HYDRANGEA	750	SYRINGA	750
JUNIPERUS		THUJA	1500-2000
-Horizontalis	1500	VIBURNUM	1500
PHYSOCARPUS		WEIGELA	1500
opulifolius	1500		



BASAL QUICK DIP METHOD:

USE Rhizopon AA Water Soluble Tablets or Hortus IBA Water Soluble Salts

Basal Quick Dip Method:

Dip the basal end of cuttings in rooting solution then plant in media.

The Quick Dip Method is well documented in many source books and articles. For lack of trial standards the reported tests have a wide range of results especially relating to the quality and age of the cuttings, and the procedures used. Begin your trials using the starting rates listed below.

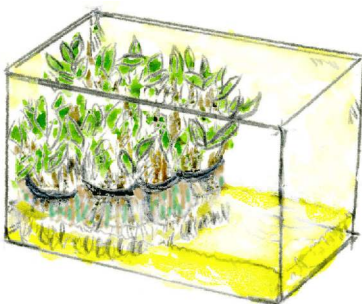
Herbaceous Cuttings, Tropical Plants, House Plants, Roses, etc.: 150-500 ppm IBA as Hortus IBA Water Soluble Salts or 3-10 tablets per liter water using Rhizopon AA Water Soluble Tablets

Chrysanthemum: 100-500 ppm IBA as Hortus IBA Water Soluble Salts or 10-20 tablets per liter water using Rhizopon AA Water Soluble Tablets.

Softwood Cuttings: 500-1000 ppm IBA as Hortus IBA Water Soluble Salts as Hortus IBA Water Soluble Salts or 10-20 tablets per liter water using Rhizopon AA Water Soluble Tablets

Hardwood Cuttings: 500-2000 ppm IBA as Hortus IBA Water Soluble Salts or 10-40 tablets per liter water using Rhizopon AA Water Soluble Tablets.

Difficult to Root Cuttings: 5000-20000 ppm IBA as Hortus IBA Water Soluble Salts.



BASAL LONG SOAK METHOD:

USE Rhizopon AA Water Soluble Tablets or Hortus IBA Water Soluble Salts

Basal Long Soak Method:

Dip the basal end of cuttings in rooting solution for about 12 hours then plant in media. Use 50-150 ppm IBA as Hortus IBA Water Soluble Salts or 1-3 tablets per liter water using Rhizopon AA Water Soluble Tablets.

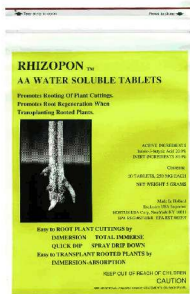
Propagate Plants from Cuttings

The Most Used Methods with Dry Powder Rooting Hormones and Water Based Rooting Solutions



Hortus IBA Water Soluble Salts

Water Soluble to Over
100,000 ppm IBA



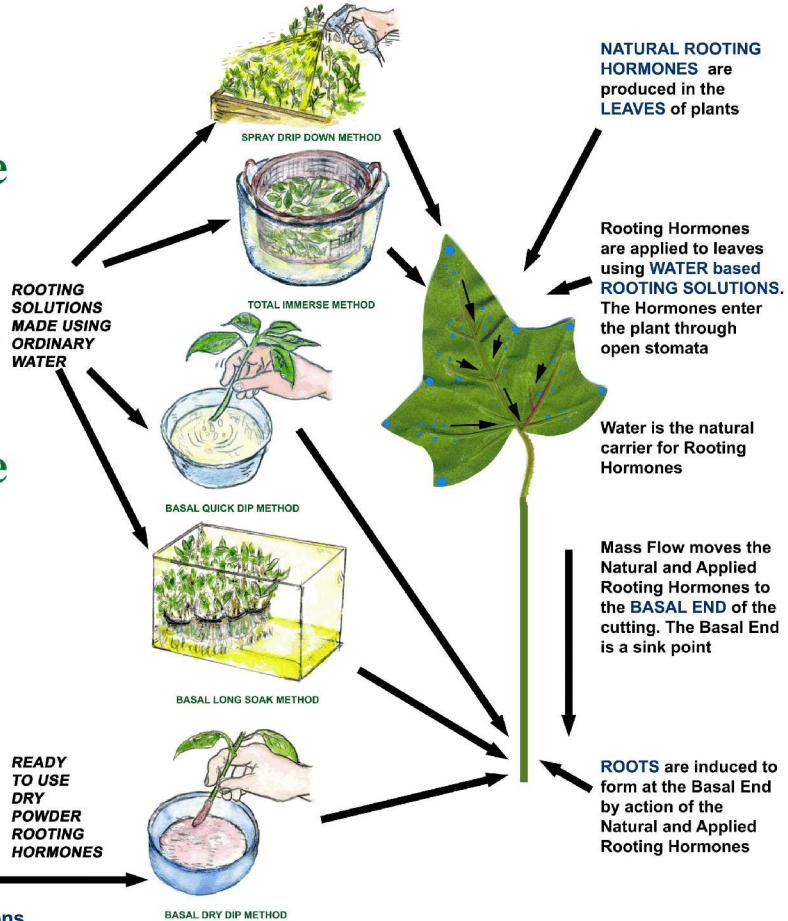
Rhizopon AA Water Soluble Tablets

Pre-measured - Count and Mix



Rhizopon AA Dry Powder Rooting Hormones

The Most Popular Concentrations



ROOTING-HORMONES.COM

Rhizopon AA #1, #2 and #3, Rhizopon AA Water Soluble Tablets and Hortus IBA Water Soluble Salts are available through your favorite horticultural supplier; ask them to order from Phytotronics. For distributor referral and support call master distributor Phytotronics: 314-770-0717, sales@phytotronics.com

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HORTUS USA CORP, PO Box 1956 Old Chelsea Station, New York NY 10113 support@hortus.com*