

USE COMPOST TEA OR EXTRACT AS SHOWN ON THIS SHEET

COMPOST EXTRACT

ITEM 1006-6003 LANDSCAPE SOIL AMENDMENT (TYPE III) and
ITEM 1006-6004 LANDSCAPE SOIL AMENDMENT (TYPE IV) requirements.

MATERIALS REQUIREMENTS

Compost for use in liquid compost/extract must contain the following (per gram dry weight of compost):

- Test within range of Soil Food Web standards using a full bio-assay to include the following:
 - 15-25 micrograms of active bacteria,
 - 100- 3000 micrograms total bacterial biomass,
 - 15-25 micrograms active fungal biomass,
 - 100-300 micrograms total fungal biomass,
 - 10,000 each of flagellates and amoebae,
 - 20-100 ciliates, and
 - 20 to 30 beneficial nematodes.
- Meet the Solvita Compost Maturity test of 6.0 or higher.

Liquid compost/extract must contain the following (per gram dry weight):

- 150-3000 micrograms total bacterial biomass,
- 2-20 micrograms total fungal biomass,
- 1000 each of flagellates and amoebae,
- 20-50 ciliates, and
- 2-10 beneficial nematodes.

Liquid compost must be verified, with time and date, for content to have minimum activity and meet minimum standards as specified above using a 100x and 400x microscope with camera attachment by a Soil Foodweb Certified Advisor or their representative. This verification must be within 30 minutes of material leaving premises on the day of manufacture. Picture will be kept on file for each 500 gallons manufactured.

Liquid compost/extract additives include the following:

- Mycorrhizal fungi endo/ecto blend sourced with a minimum potency of 100,000 propagules per pound with NO Tricoderma included in the inoculum.
- Humate, low sodium, naturally processed 70% humate that has been liquefied to 12% humic-fulvic as available from Mesa Verde Resources at 877-418-8776 or approved equal.
- Fulvic acid derived from natural shale ore as available from Sustainable Growth Texas at 936-232-5738 or approved equal.
- Soluble kelp seaweed, dehydrated liquid extract made from the seaplant Ascophyllum nodosum as available from Sustainable Growth Texas at 936-232-5738, or approved equal.
- Naturally derived blackstrap non-sulfured molasses (for foliar application only).

Liquid compost/extract with additives solution must sit on air for 3-4 hours and monitored every 1/2 hour with a Dissolved Oxygen Meter to assure the material does not drop below 6ppm oxygen content during full activation period.

EQUIPMENT REQUIREMENTS

For each batch use a delivery tank verified for overall cleanliness, to be free of residue, soil, compost or stains. Tank shall then be rinsed with clean non-chlorinated or non-chloramines treated well water before filling with Liquid Compost. All equipment used for application of liquid compost must have never been used or will not be used with any non organic conventional inorganic fertilizers or chemical herbicides or pesticides, owner must submit written verification to this.

Tank shall be equipped with two, 2 inch quick coupler type fittings capable of coupling, without leaks. All lines and fittings should have quick couplers at every junction. Ninety (90) degree bend fittings should be avoided for quick clean out and verification of cleanliness.

Delivery tank must be equipped with an operating circulation pump of a low velocity, high volume pump of diaphragm or centrifugal design.

Injectors capable of penetrating four (4) inches into soil and/or root balls as manufactured by LESCO Deeproot Feeder at 713-466-6730 or approved equal.

Delivery tank must be equipped with an operating aeration system.

Dissolved oxygen meter.

TRANSPORT, STORAGE AND APPLICATION REQUIREMENTS

Liquid compost/extract with additives solution must be circulated for five (5) minutes per five hundred (500) gallons of material every three (3) hours. Liquid compost/extract with additives solution must be continuously aerated from time of manufacture through complete application. All solution must be applied within 24 hours, or new material must be sourced. Materials not applied within 24 hours is not allowed.

CONSTRUCTION METHODS AND APPLICATION RATES

1006-6003 LANDSCAPE SOIL AMENDMENT (TYPE III) SY

Installation date: Install root injection 14 calendar days minimum to 30 calendar days maximum after plant installation. Limits: Each injected tree and woody shrub equals one square yard of Landscape Soil Amendment (Type III).

Inject 1/2 gallon liquid compost/extract with additives solution four (4) inches into the root zone and/or rootball of each tree and woody shrub only. Mix additives with liquid compost/extract using the following rates:

- Mycorrhizal fungi endo/ecto blend: 30 lbs per 500 gallons of liquid compost/extract,
- Humate: 30 lbs per 500 gallons of liquid compost/extract,
- Fulvic acid: 32 oz per 500 gallons of liquid compost/extract,
- Soluble kelp seaweed: 2 lbs per 500 gallons of liquid compost/extract.

1006-6004 LANDSCAPE SOIL AMENDMENT (TYPE IV) SY

Installation date: Install first foliar application 30 calendar days minimum to 60 calendar days maximum after root injection described on this sheet. Additional foliar applications as described on following sheets.

Limits/measurement: Each SY of foliar spray equals each tree or woody shrub. Spray foliar application over all trees and woody shrubs.

Solution must be sprayed targeting the full surface of the plant including leaves (top and bottom), limbs and trunk.

Spray foliar application at the following rates:

- Liquid compost/extract: 500 gallons per acre,
- Humate: 2 lbs per acre,
- Fulvic acid: 32 oz per acre,
- Soluble kelp seaweed: 2 lbs per acre,
- Blackstrap molasses: 16 oz per acre.

Soil Foodweb Certified Advisor:

Sustainable Growth Texas
103 Sherbrook Circle
Conroe, TX 77385
936-232-5738
sustainablegrowthtexas.com

Soil Foodweb Oregon, LLC
728 SW Wake Robin Ave.
Corvallis, Oregon 97333-1612
541-752-5066
soilfoodweb.com

Soil Foodweb New York, Inc.
555-7 Hallock Ave.
Port Jefferson Station, NY 11776
631-474-8848
soilfoodwebny.com

COMPOST TEA

ITEM 1006-6003 LANDSCAPE SOIL AMENDMENT (TYPE III) and
ITEM 1006-6004 LANDSCAPE SOIL AMENDMENT (TYPE IV) requirements.

MATERIALS REQUIREMENTS

Compost for use in liquid compost tea must contain the following (per gram dry weight of compost):

Test within range of Soil Food Web standards using a full bio-assay to include the following:

- 15-25 micrograms of active bacteria,
- 100- 300 micrograms total bacterial biomass,
- 15-25 micrograms active fungal biomass,
- 100-300 micrograms total fungal biomass,
- 10,000 each of flagellates and amoebae,
- Less than 50 ciliates, and
- No root feeding nematodes present.

Actively aerated compost tea must contain the following per milliliter as applied (measured after having passed through the actual application apparatus):

1. Meet the minimum desired ranges by Soil Food Web for:

- Active bacteria 10-150
- Total bacteria 150-3000
- Active Fungi 2-10
- Total Fungi 2-20
- Flagellates and amoebae 2000 combined
- Ciliates 50 or less
- No root feeding nematodes present

Tea is to be tested from application device a minimum once per month during each application cycle. Each batch of actively aerated compost tea must be qualitatively assessed using light microscope methods as established by Soil Food Web. Photographs of microscopy must be kept on file with a qualitative assay report.

If the following additives are used in tea brewing to meet the minimum biological standards, the additives must meet these standards.

- Fish Hydrolysate - certified organic manufacturers documentation verifying no oil extraction has occurred.
- Kelp - must be certified organic soluble extract.
- Humic Acid - certified organic water extracted.
- Molasses - certified organic blackstrap molasses.

Actively aerated compost tea must maintain dissolved oxygen level above 6 mg/l until application. Use a dissolved oxygen meter to monitor.

EQUIPMENT REQUIREMENTS

For each batch use a delivery tank verified for overall cleanliness, to be free of residue, soil, compost or stains. Tank shall then be rinsed with clean non-chlorinated or non-chloramines treated well water before filling with Liquid Compost Tea. All equipment used for application of liquid compost must have never been used or will not be used with any non organic conventional inorganic fertilizers or chemical herbicides or pesticides, owner must submit written verification to this nature.

Application pump must be high volume (greater than 3.0 gpm) and low pressure (less than 60 psi). Application pump must be a diaphragm type pump. Foliar application device must be capable of adequately covering front and backs of leaves. Foliar application device shall be Gunjet AA18-AL or approved equal.

Delivery tank must be equipped with an operating aeration system capable of maintaining 6 mg/l oxygen content.

Injectors capable of penetrating four (4) inches into soil and/or root balls as manufactured by LESCO Deeproot Feeder at 713-466-6730 or approved equal.

Dissolved oxygen meter.

TRANSPORT, STORAGE AND APPLICATION REQUIREMENTS

Actively aerated compost tea must be continuously aerated from time of manufacture through complete application. Materials not applied within 24 hours are not allowed.

CONSTRUCTION METHODS AND APPLICATION RATES

1006-6003 LANDSCAPE SOIL AMENDMENT (TYPE III) SY

Installation date: Install root injection 14 calendar days minimum to 30 calendar days maximum after plant installation.

Limits: Each injected tree and woody shrub equals one square yard of Landscape Soil Amendment (Type III).

Inject 1/2 gallon liquid compost tea with additives solution four (4) inches into the root zone and/or rootball of each tree and woody shrub only. Mix additives with compost tea using the following rates:

- 8 oz/ Fish Hydrolysate per gallon.

1006-6004 LANDSCAPE SOIL AMENDMENT (TYPE IV) SY

Installation date: Install first foliar application 30 calendar days minimum to 60 calendar maximum after root injection described on this sheet. Additional foliar applications as described on following sheets.

Limits/measurement: Each SY of foliar spray equals each tree or woody shrub. Spray foliar application over all trees and woody shrubs.

Solution must be sprayed targeting the full surface of the plant including leaves (top and bottom), limbs and trunk.

Spray foliar application at the following rate:

- Liquid compost tea: 500 gallons per acre.

Soil Foodweb Certified Advisor:

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103 Sherbrook Circle
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Soil Foodweb Oregon, LLC
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HOUSTON DISTRICT

PLANTING AND ESTABLISHMENT

SHEET 5 of 8

Details not to scale COMPOST TEA/EXTRACT

FILE:	FED DIST	STATE	PROJECT NUMBER			SHEET
	6	TEXAS				
REVISIONS:	DIST	COUNTY	CONTROL	SECT	JOB	HIGHWAY
FEB 2015 for 2014 specs	12					