

*Disclosure Information About the Activation of EM-1®

The use of biological products in agriculture and animal husbandry is the future of regenerative agriculture. Nevertheless, biological products need to work with living cells of microorganisms that are able to:

1. Survive in the environment where it is applied
2. Activate or wake up from its dormant state
3. Multiply or proliferate, to reach a number large enough to have the right effect

Unfortunately most of the biological products available on the market today are industrialized through chemical mediums and lyophilization (freeze drying) in which all the cells need to go through those three steps above to have some effect where they are applied.

The reason EM•1® is superior to all other biological products currently available on the market in the USA, is that EM•1® is industrialized through **natural processes** that keep the microorganisms in their natural states.

EM•1® is even able to bypass those three survival steps above, as well as add an extra, and very powerful benefit to its uses. EM•1® produces metabolites, natural beneficial substances that support life. How? By using a simple process of controlled activation.

EM•1® is a microbial concentrate, and the microorganisms inside are dormant, but in their natural state. This means that waking up these microorganisms is very simple. Just add 5% molasses plus 5% of EM•1® concentrated solution and 90% water together and mix well. Let the mixture ferment for 7 days. That is it! After 7 days, the microorganisms will be awake, bypassing the survival and dormant state, and proliferate in the solution.

During these 7 days of controlled activation, when the exact quantity of molasses (sugar) is used, the microorganisms will fill up the activated solution with metabolites such as amino-acids, organic acids, vitamins, enzymes and antioxidants that support other life forms that can also feed plants and animals. Those substances are “the icing on the cake”.

Over the last 40 years EM Research Organization (EMRO) has invested heavily world wide in standardizing this activation process so that every user can get the highest performance with the most consistency from EM•1® Technology.

By adding precisely 5% of EM-1® and Molasses and 90% water and waiting at least 7 days, EM•1® not only reaches its full potential but also becomes 100% free of any possible contamination from other pathogenic microorganisms. ***That makes EM•1® the safest biological product available on the market and as such, it has been granted several distinct certifications, including organic.***

So, the controlled activation process is important in order to bypass all survival processes of the microorganisms, creating a very powerful natural biochemical barrier against pathogenic microbes, and enriching the solution with powerful amino acids essential to the growth of animals and plants.

All instructions, directions and recommendations of EM•1® microbial solution are standardized on the process of activating EM•1® concentrate at:

- 5% Concentrated EM-1® solution
- 5% Molasses
- 90% Water

The use of EM-1® outside of this recommendation will result in less than optimal performance and is not the responsibility of TeraGanix or its partners. Please check below for further information on how to activate EM•1® properly.

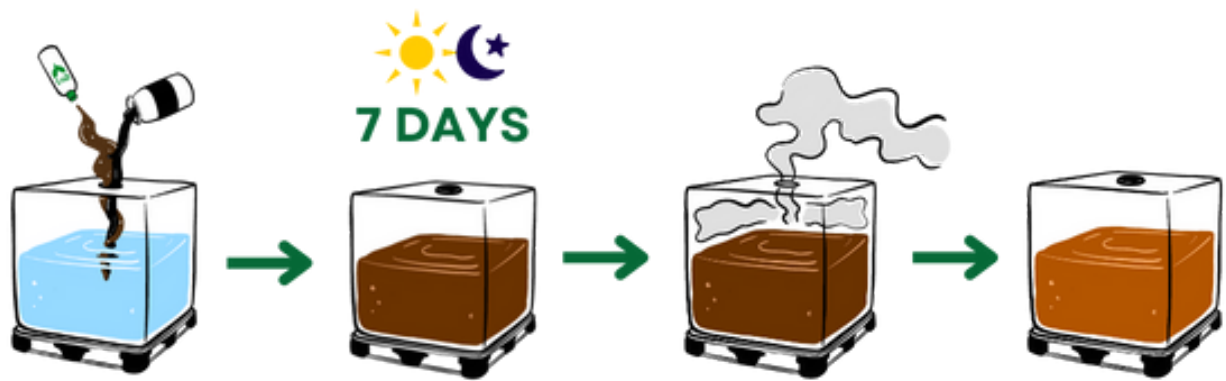
Use table below to determine ingredients required:

EM•1®	Molasses	Water	Activated EM•1®
Gal	Gal	Gal	Gal
0.5	0.5	9	10
1.0	1.0	18	20
2.5	2.5	45	50
5.0	5.0	90	100
10.0	10.0	180	200
12.5	12.5	225	250
25.0	25.0	450	500

1: In a clean container, add 1 part (5%) of EM•1®, and 1 part (5%) of pure molasses, mixed in 18 parts (90%) of warm clean water. Mix well to form a homogeneous solution.

2: Let the solution ferment for 5-7 days. If using an airtight container, release the gases produced from the fermentation every few days.

3: Activated EM•1® is ready to use from the 5th-7th day, when the pH of the solution is between 3.2-3.8, or when it has a pleasant bittersweet smell and the color changes from dark brown to orange-brown. Activations that are still between 4.0-4.5pH AFTER 8 days are good to use.



ADDITIONAL NOTES

- Activated EM•1[®] should ideally be used within 45 days of activation. It can be applied by spray or through a pre-established irrigation system. It can be diluted to adapt to the application system such as irrigation tanks, spray tankers or backpack pumps.
- For best results, activate in temperatures equal or greater than 62°F. Activations in temperatures below 62°F will take longer than 7 days to activate, and activation (or storage) below 31°F will freeze and kill microbes (including EM•1[®]).
- Always store the Activated EM•1[®] in a cool, protected environment to keep out dust and water.
- EM•1[®]-Activated is totally biodegradable and compatible with mineral oils, natural fertilizers, foliar fertilizers and biological agents. Commonly used tackifiers and moisturizers can be used.
- EM•1[®]-Activated is not compatible with chlorine, copper products, bactericides and fungicides. In case of having to apply a fungicide or insecticide to the crop, it is recommended to wait at least 4 days to reapply EM•1[®]-Activated.
- Dosage rates: **Composting of organic waste: 2 liters of EMA per m³ or Ton., when assembling the pile and when the temperature reaches 60°C. Apply this fertilizer directly in the field at a dose of 1 Kg/m². **Soils and substrates: 20 to 40 gallon of EMA per acre, split between 4 to 8 times per year. **Hydroponics: Run 1 gallon of EMA per 1,000 gallons of nutrient solution continuously in the production cycle.
- For large farms or operations, email gcollier@teraganix.com or call 903-226-7073