

## Bokashi EM

Bokashi is an extremely effective way of turning a wide range of waste food materials into nutrient-rich compost. It is a two-stage process, with the first stage being fermentation and the second being standard composting (requiring a normal compost bin or heap).

A special air tight bin with a tap is required for the fermentation stage. All kitchen food waste including cooked fruit and vegetables, meat, fish, dairy products and cooked food scraps can be put into the bin along with Bokashi, which is a bran based material loaded with friendly bacteria or Effective Micro-organisms. Once full the contents of the bin are left to ferment for a period of two weeks. After two weeks the contents of the caddy will be fermented and can be composted safely at home. A set of two bins are required so that as one is fermenting another can be filled. The bins are relatively small and can be used in the kitchen.



### Getting started

- Make sure the tap in the sump of the bin is secure (ensure it is not over tightened as it may leak) and the plastic grate is in place.
- Begin to add food waste into the bin.
- Sprinkle on a handful of Bokashi bran, press down (as described below) to exclude the air and replace the lid. Try to limit the number of times you add material to once a day so not to introduce air.
- Once the fermentation process is underway drain the liquid regularly from the bin using the special tap.
- When the bin is full, it needs to be left for two weeks or more to ferment. During this period you should start to fill a second Bokashi bin in the same way as the first.
- After the two week fermentation period (or however long it takes to fill your second bin) the contents should have developed a characteristic alcoholic odour and have white mould on the surface. The presence of these will confirm that the Bokashi system is working well.
- The fermented contents should now be treated as 'green' nitrogen rich material and mix with 'brown' carbon rich materials in a compost bin or heap or dig into the ground.
- Rinse the bucket with water (no detergent), drain and then you can continue to recycle your food scraps!

The fermented material, when put into the compost bin, does not attract vermin and foxes as they dislike the acidic nature of the material.

To help the Bokashi process work, it is important to keep as much air from the fermenting foodstuffs as possible. One way to do this is to compress the food waste each time you add

some to the bin. This could be done using a flat piece of plastic or a piece of cardboard wrapped with cling film which could then be left in place after the lid is replaced.

## **The Bokashi liquid**

The amount of liquid produced will depend on the type of food added.

The liquid produced during the fermentation process contains nutrients and Effective Micro organisms and can be used:

- **As a soil improver.** The Effective Micro organisms within the liquid will grow and multiply and establish themselves on a permanent basis in the soil dominating the harmful bacteria, viruses and fungi that maybe present.  
Bokashi has been traditionally used in Japan in order to increase the level of microbial diversity in the soil and provide plants with bioactive foodstuffs such as growth hormones, antibiotics, vitamins and amino acids.
- **As a plant food.** Dilute 1 teaspoon of liquid to 5 litres of water for house plants and 2 teaspoons of liquid to 5 litres of water for trees and shrubs and apply direct to the soil. The liquid feed should be used within a few days of draining.
- **Around the house.** Pour the concentrated liquid directly into your kitchen and bathroom drains, toilets or septic tanks. The Effective Micro organisms will help to prevent algae build up and control odours

## **Common Questions**

### **The contents of the bin smell bad, what should I do?**

This could be because not enough Bokashi Bran has been added; the liquid needs draining more regularly or the lid hasn't been closed tightly and fermentation has become aerobic. Try adding more Bokashi bran and ensure you drain the liquid frequently. Also, make sure that the lid is closed tightly after adding food waste material.

### **White mould is growing on the food material, should this happen?**

This is a sign that the material is fermenting correctly. You should continue as before.

### **Green mould is growing on the food material, should this happen?**

This is a sign that the material has failed to ferment. You should dispose of the material in your refuse collection and start again, ensuring you add enough Bokashi bran, drain the liquid frequently and ensure the lid of your bucket is on tight after each addition of food.

### **Is fermenting different to composting?**

Yes. Fermentation occurs at a faster rate than composting and without oxygen, resulting in reduced gas emissions and a higher nutritional value of the fermented material. Also, as the microbes in the Bokashi work without oxygen, they do not produce heat or odours and break down quickly once dug into the soil or composted in the traditional way.

### **Do I need to wash my Bokashi bins?**

Yes. The bins will need to be washed out with fresh water every time you empty them. Do not use any soaps or detergents, as these will kill the microbes.

### **What if I go on holiday?**

Drain the liquid from the bucket before you leave and make sure that there is a cover of Bokashi grains on top of the waste. Ensure that the lid is tightly secured and then enjoy your holiday.

### **How do I know if my Bokashi bin is working?**

If your Bokashi bucket does not smell it is working correctly. Also, the waste should be fermenting and will look like it is pickled. It will not decompose in the bucket. Decomposition will begin once the fermented material goes into your compost bin or the soil.

### **Why does my Bokashi bin smell?**

If you notice that your Bokashi bucket has started to develop a strong smell, or if it appears to have black or blue fungi – that indicates contamination has occurred and could be a result of:

- The lid has not being closed tightly after each use;
- Not enough Bokashi grains being added;
- Not draining the liquid regularly enough; or
- Prolonged and direct exposure to sunlight or extreme temperatures.

To fix smelly Bokashi bins, find a spot in the garden away from plants and dig a 30cm hole. Place three handfuls of Bokashi grains in the bottom of the hole and tip in the food scraps. Mix in some soil then cover with another layer of Bokashi grains before filling in the hole with soil.