Bokashi Composting for Small Apartments

Turn Kitchen Scraps Into Liquid Gold Without Leaving Your Home

A complete beginner-friendly guide from Tiny Plot Living

What Is Bokashi Composting?

Bokashi composting is a fermentation method that transforms all your kitchen scraps—including meat, dairy, and cooked foods—into nutrient-rich pre-compost and liquid fertilizer right in your apartment kitchen[1][2]. Unlike traditional composting that requires outdoor space and relies on decomposition, bokashi uses beneficial microorganisms to pickle your food waste in an airtight container[3].

Why bokashi is perfect for apartment living:

- Works indoors in small spaces—fits under kitchen sink or on countertop
- Completely odor-free when sealed properly (smells slightly pickled, like sauerkraut, when opened)
- Accepts ALL food waste: meat, bones, dairy, citrus, cooked foods, bread, coffee grounds
- Produces liquid fertilizer (bokashi tea) every few days for houseplants
- Fast process—fermentation complete in 2–4 weeks
- No fruit flies, no mess, no outdoor space required
- Reduces household waste by 30–50%

Bokashi composting gives city dwellers a realistic zero-waste solution that works in the smallest apartments without compromising on convenience[1][2][4].

Figure 1: Mother and daughter adding kitchen scraps to bokashi bin on apartment counter

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How Bokashi Composting Works

Bokashi is a two-stage anaerobic fermentation process developed in Japan in the 1980s[5][6].

Stage 1: Fermentation in the bokashi bin (2–4 weeks)

1. Add food scraps to airtight bokashi bin
2. Sprinkle bokashi bran (inoculated with beneficial microbes) over scraps
3. Press down to remove air pockets
4. Seal lid tightly
5. Drain liquid fertilizer (bokashi tea) every 2–3 days
6. Repeat until bin is full
7. Let full bin ferment for 2 weeks minimum

What happens during fermentation: Beneficial bacteria and yeast (primarily lactic acid bacteria) rapidly acidify the food waste, preserving it like kimchi or pickles[3][5]. This prevents rot, eliminates odors, and breaks down organic matter.

Stage 2: Soil integration (2–4 weeks)

After fermentation, the pickled pre-compost must be mixed with soil to complete breakdown[6][7]:

- Dig into garden beds or outdoor planters
- Mix into large container with potting soil
- Bury in community garden plot
- Add to traditional compost pile to accelerate decomposition

For apartment dwellers without outdoor space: Use a secondary container (storage tote or large planter) filled with potting soil. Bury fermented waste in the soil, wait 2–4 weeks, and use the finished compost for houseplants or balcony containers[7][8].

Figure 2: Complete bokashi composting kit with dual buckets, bran, and tools

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Step 1: Get Your Bokashi Supplies

Essential supplies

Item	Purpose	Approximate Cost
Bokashi bin (2–5 gallon)	Airtight fermentation container	$30–$60
Bokashi bran	Microbial inoculant	$15–$25/bag (lasts 2–3 months)
Drainage tray or spigot	Collects liquid fertilizer	Included in most bins
Masher or tamper	Compresses scraps, removes air	Included in most bins
Secondary soil container	Stage 2 finishing (apartment)	$10–$20 (storage tote)

Table 1: Bokashi starter supplies and costs

Choosing your bokashi bin

Features to look for:

- **Airtight lid with seal:** Critical for anaerobic fermentation
- **Built-in spigot or drainage tray:** Easy access to bokashi tea without opening bin
- **Mesh plate or false bottom:** Separates liquid from solid waste
- **Compact size:** 2–3 gallon bins fit under most kitchen sinks
- **Opaque material:** Blocks light, which can interfere with fermentation

Bin size guide:

- **1–2 people:** 2–3 gallon bin; fills in 2–3 weeks
- **3–4 people:** 5 gallon bin or two 3-gallon bins in rotation
- **Heavy cookers/families:** Two 5-gallon bins for continuous system

Pro tip: Start with two bins so one can ferment while you fill the second. This creates a continuous composting system without waiting[6][9].

Understanding bokashi bran

Bokashi bran is wheat bran or sawdust inoculated with effective microorganisms (EM), primarily lactic acid bacteria, yeasts, and photosynthetic bacteria[5][10].

What's in bokashi bran:

- Lactic acid bacteria (LAB) – acidifies waste, prevents rot
- Yeasts – break down sugars and starches
- Photosynthetic bacteria – enhance nutrient availability
- Actinomycetes – decompose complex proteins

Store bokashi bran properly: Keep sealed in cool, dry place. Bran lasts 6–12 months if stored correctly[10].

Step 2: What Can (and Can't) Go in Your Bokashi Bin

Bokashi accepts nearly all food waste, making it more versatile than traditional composting[11][12].

What you CAN add

- **All fruit and vegetable scraps:** Including citrus peels, onion skins, garlic
- **Meat and fish:** Raw or cooked, bones, skin, fat
- **Dairy products:** Cheese, yogurt, milk, butter
- **Bread, pasta, rice:** Any grain products
- **Coffee grounds and tea bags:** Including paper tea bags
- **Egg shells:** Crushed for faster breakdown
- **Wilted flowers:** Small amounts
- **Paper towels and napkins:** If food-soiled

What you CANNOT add

- Large bones (beef/pork leg bones) – too slow to break down
- Liquids (milk, juice, soup) – drain first, add solids only
- Oil in large quantities – small amounts okay
- Paper, cardboard, wood – won't ferment properly

- Pet waste – health/safety risk
- Already moldy or rotten food – introduces wrong microbes

Preparation tips:

- Chop large items into smaller pieces (speeds fermentation)
- Drain excess liquid from scraps before adding
- Remove produce stickers and rubber bands
- Crush egg shells, coffee grounds help absorb moisture

Figure 3: Layering chopped vegetable scraps into bokashi bin

Step 3: Daily Bokashi Bin Routine

Maintaining your bokashi bin takes less than 2 minutes per day[1] [13].

Daily process

1. **Collect scraps:** Keep small container on counter during meal prep; add to bin at end of day
2. **Open bin:** Remove airtight lid
3. **Add scraps:** Place food waste on top of previous layer
4. **Sprinkle bran:** Add 1–2 tablespoons bokashi bran (roughly 1 handful) over scraps
5. **Press down:** Use masher/tamper to compress waste, eliminate air pockets
6. **Seal immediately:** Close lid tightly to maintain anaerobic environment
7. **Drain tea (every 2–3 days):** Open spigot, drain liquid into container

How much bran to use

Amount of Scraps Added	Bokashi Bran Needed
Small handful (1 cup)	1 tablespoon bran
Daily scraps (2–4 cups)	2 tablespoons (1 handful)
Large batch (8+ cups)	4 tablespoons (2 handfuls)

Table 2: Bran to food waste ratios

General rule: More bran = faster fermentation. You can't add too much bran, but too little slows the process[10][13].

Pressing technique matters

Why pressing is critical:

- Removes oxygen (fermentation is anaerobic)
- Prevents white mold growth on surface
- Maximizes bin capacity
- Speeds up fermentation process

How to press effectively: Use flat-bottomed tamper or potato masher to compress each layer firmly until scraps are tightly packed and little air remains[1][13].

Step 4: Harvesting and Using Bokashi Tea

Bokashi tea is the liquid that drains from fermenting food waste—a potent, nutrient-rich fertilizer for plants[14][15].

What is bokashi tea?

Bokashi tea is the acidic liquid produced during fermentation, containing:

- Beneficial microorganisms (probiotics for soil)
- Nutrients leached from food waste (nitrogen, phosphorus, potassium)
- Organic acids that improve soil structure
- Enzymes that boost plant growth

Important: Bokashi tea is highly concentrated and acidic (pH 3–4). Always dilute before use[14][15].

How to collect bokashi tea

1. Check bin every 2–3 days for liquid accumulation
2. Open spigot or lift drainage tray
3. Drain tea into jar or watering can
4. Use within 24–48 hours (microbes are alive and active)

Frequency: Expect 1/2 to 1 cup of tea every 2–3 days once bin is actively fermenting[14].

Figure 4: Draining bokashi tea from spigot for use as liquid fertilizer

Using bokashi tea as fertilizer

Dilution ratios:

Use	Dilution Ratio	Application
Houseplants	1:100 (1 tsp tea per 2 cups water)	Weekly watering
Outdoor plants	1:50 (1 tbsp per quart water)	Bi-weekly watering
Drain cleaner	Undiluted	Pour 1/4 cup down drain weekly

Table 3: Bokashi tea dilution and uses

Application tips:

- Water soil, not leaves (avoid foliar application)
- Use on established plants, not seedlings
- Apply during regular watering schedule
- Don't over-apply—more isn't better
- Store unused diluted tea in fridge for up to 1 week

Bonus use: Undiluted bokashi tea poured down drains weekly prevents clogs and eliminates odors by establishing beneficial bacteria colonies in pipes[15].

Step 5: Finishing Your Fermented Pre-Compost

After your bin is full and has fermented for 2 weeks minimum, the pickled food waste is ready for Stage 2: soil integration[6][7].

When is fermentation complete?

Signs fermentation is finished:

- Bin has been full and sealed for 2+ weeks
- Food waste looks pickled/preserved (not rotted)
- Smells sour/acidic, like vinegar or pickles (not putrid)

- White mold may be present on surface (normal and beneficial)
- Scraps maintain original shape but soften

Note: Fermented bokashi is NOT finished compost. It's acidic pre-compost that must be mixed with soil to neutralize and complete breakdown[7].

Apartment finishing methods

Option 1: Soil factory container (best for apartments)

1. Get 18-gallon storage tote with lid
2. Fill halfway with potting soil
3. Dig trench in center of soil
4. Add fermented bokashi waste to trench
5. Cover completely with 2–4 inches of soil
6. Seal container with lid
7. Wait 2–4 weeks (longer in winter)
8. Result: nutrient-rich compost for houseplants

Container size guide:

- 3-gallon bokashi bin → 18-gallon soil factory
- 5-gallon bokashi bin → 27-gallon soil factory

Option 2: Large planter method

1. Use large outdoor balcony planter (12+ inches deep)
2. Dig hole in existing potting soil
3. Bury fermented waste in hole
4. Cover with 3–4 inches soil
5. Don't plant directly over buried waste for 2–3 weeks
6. After waiting period, plant normally

Option 3: Community solutions

- ShareWaste app—find nearby gardeners who want your bokashi
- Community gardens—offer to bury in garden plots
- Friends/family with yards—share your fermented gold
- Local urban farms—many accept bokashi donations

Troubleshooting Stage 2

Issue	Solution
Strong ammonia smell	Not enough soil coverage; add more soil on top
Very slow breakdown	Too cold; move to warmer location (65–75°F ideal)
Fruit flies	Soil layer too thin; must cover with 3+ inches soil

Table 4: Common Stage 2 problems

Step 6: Troubleshooting Bokashi Problems

Even the simplest systems encounter occasional issues[16][17].

Problem: Foul, rotten smell (not pickled/sour)

Cause: Anaerobic fermentation failed; aerobic decomposition (rot) occurred instead.

Solution:

- Check lid seal—must be completely airtight
- Add more bokashi bran with each addition
- Press waste down more firmly to eliminate air
- Don't open bin unnecessarily
- Empty current batch into soil; start fresh

Problem: White fuzzy mold on surface

Status: Normal and beneficial! White mold indicates successful fermentation[16].

Action: No action needed. Press down gently and continue adding scraps.

Concern only if: Mold is blue, green, or black → indicates spoilage, not fermentation.

Problem: No liquid (bokashi tea) draining

Causes and solutions:

- **Scraps too dry:** Add moisture-rich scraps (fruit, vegetables)
- **Not enough time:** Wait 5–7 days from start for first tea
- **Clogged spigot:** Clean spigot with warm water
- **Dry food dominating:** Coffee grounds, bread absorb moisture; balance with wet scraps

Problem: Excessive liquid pooling

Causes and solutions:

- **Very wet scraps:** Drain juicy items before adding; squeeze excess liquid
- **Infrequent draining:** Drain tea every 2 days minimum
- **No drainage layer:** Add coffee grounds or shredded paper at bottom to absorb excess

Problem: Fruit flies or gnats

Causes and solutions:

- **Lid not sealed:** Check gasket; ensure tight closure
- **Flies entered when open:** Add extra bran layer, press firmly, minimize opening time
- **Bin left open:** Always seal immediately after adding scraps

Prevention: Keep bin sealed at all times except when adding scraps[17].

Step 7: Tips for Long-Term Bokashi Success

Maximize your system

- **Two-bin rotation:** One fills while one ferments—continuous composting[9]
- **Pre-chop large items:** Smaller pieces ferment faster
- **Keep bin in consistent temperature:** 60–75°F ideal; avoid freezing or excessive heat

- **Don't overfill:** Leave 2 inches headspace for pressing and gas expansion
- **Layer bran between thin layers:** If adding 1–2 days of scraps, sprinkle bran between

Seasonal adjustments

Summer (warmer temperatures):

- Fermentation speeds up—may finish in 10–14 days
- Check for liquid more frequently
- Keep bin in coolest indoor location (avoid direct sunlight)

Winter (colder temperatures):

- Fermentation slows—may need 3–4 weeks
- Keep bin in warmer area (near heat source, not cold garage)
- Use slightly more bran to compensate

Cost savings over time

- **Initial investment:** $50–$80 (bin + bran)
- **Monthly cost:** $5–$10 (bran replacement)
- **Payback:** Free liquid fertilizer worth $10–$15/month; finished compost worth $20+/batch
- **Waste reduction:** Save $5–$10/month on garbage bags and disposal fees

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Step 8: Your 30-Day Bokashi Composting Plan

Ready to start? Follow this timeline for first-time success.

Week 1: Setup and start

1. **Day 1:** Purchase bokashi bin, bran, and soil container
2. **Day 2:** Set up bin in convenient kitchen location (under sink, corner counter)
3. **Day 3:** Begin adding first scraps + bran; establish daily routine
4. **Days 4–7:** Continue daily additions; practice pressing technique

Week 2: Building routine

1. **Days 8–10:** First bokashi tea appears; drain and dilute for plants
2. **Days 11–14:** Establish rhythm: add scraps, sprinkle bran, press, seal, drain tea every 2–3 days

Week 3: First bin fills

1. **Days 15–18:** Bin approaches full capacity
2. **Day 19:** Add final scraps, generous bran layer, press firmly, seal for fermentation
3. **Day 20:** Start second bin (if using two-bin system) or pause collection

Week 4: Fermentation completes

1. **Days 21–28:** Let sealed bin ferment undisturbed
2. **Day 29:** Check for pickled smell, preserved appearance
3. **Day 30:** Bury fermented waste in soil container; begin Stage 2

Ongoing maintenance

- Continue filling second bin while first batch finishes in soil
- After 2–4 weeks in soil, use finished compost for houseplants
- Rinse empty bokashi bin with diluted bokashi tea (preserves beneficial microbes)
- Restart cycle with clean bin

Beyond the Basics: Advanced Bokashi Tips

Make your own bokashi bran

Why DIY: Save 50–70% on bran costs for long-term composters.

Basic recipe:

1. Purchase EM-1 microbial inoculant (liquid concentrate)
2. Mix 1 tablespoon EM-1 + 1 tablespoon molasses + 2 cups warm water
3. Add mixture to 10 cups wheat bran in large container
4. Mix thoroughly until evenly moist (not soaking)

5. Pack into airtight bag, press out air
6. Ferment 2 weeks in warm location
7. Dry on tarp in thin layer
8. Store in airtight container

Cost comparison: Commercial bran $15–$25 per bag vs. DIY $5–$8 per batch[10].

Bokashi for pet owners

- Dog/cat food scraps: Yes, add to bin
- Pet waste (feces): No, never add—health risk
- Pet fur: Small amounts okay

Scaling up for families

Large households generating 5+ pounds food waste daily:

- Use two 5-gallon bins in rotation
- Increase soil container size (two 27-gallon totes)
- Buy bran in bulk (5–10 lb bags)
- Consider outdoor soil factory (large raised bed dedicated to bokashi finishing)

Next Steps: Start Composting Today

Bokashi composting transforms apartment living by giving you a practical, odor-free way to eliminate food waste and create valuable resources for plants.

Your immediate action plan:

1. Order bokashi starter kit (bin + bran) today
2. Set up bin in kitchen when it arrives
3. Begin adding scraps tomorrow
4. Drain first bokashi tea in 7–10 days
5. Experience satisfaction of zero food waste within 30 days

Join the movement: Thousands of apartment dwellers worldwide now compost successfully with bokashi. You can too.

For more small-space sustainability tips, visit **www.tinyplotliving.com** and download our free composting trackers and resource guides.

Happy composting!

Glossary

Aerobic decomposition: Breakdown of organic matter in the presence of oxygen; traditional composting method that produces heat and requires outdoor space.

Anaerobic fermentation: Breakdown of organic matter without oxygen; bokashi method that preserves waste through acidification instead of decomposition.

Bokashi bran: Wheat bran or sawdust inoculated with effective microorganisms (EM), primarily lactic acid bacteria, used to ferment food waste.

Bokashi tea: Acidic liquid that drains from fermenting food waste; nutrient-rich fertilizer that must be diluted before use.

Effective microorganisms (EM): Mixture of beneficial bacteria, yeasts, and fungi used in bokashi bran to ferment food waste.

Fermentation: Process by which microorganisms convert organic matter into acids, preserving it and preventing rot; similar to pickling vegetables.

Lactic acid bacteria (LAB): Primary microbes in bokashi bran that acidify food waste, prevent putrefaction, and preserve nutrients.

Pre-compost: Fermented food waste from bokashi bin that looks pickled/preserved; must be mixed with soil to complete breakdown into finished compost.

Soil factory: Secondary container (storage tote or large planter) filled with soil where fermented bokashi waste completes Stage 2 breakdown.

Spigot: Tap or valve at bottom of bokashi bin used to drain liquid fertilizer (bokashi tea) without opening the lid.

Stage 1: First phase of bokashi composting where food scraps ferment in airtight bin for 2–4 weeks.

Stage 2: Second phase where fermented pre-compost is buried in soil for 2–4 weeks to complete breakdown into finished compost.

White mold: Beneficial fungal growth that appears on surface of fermenting bokashi; indicates successful fermentation (normal and desirable).

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