Standard Operating Procedure (SOP): Composting Food Waste

This SOP provides detailed **instructions for composting food waste**, covering the collection and segregation of organic waste, preparation and layering techniques, optimal moisture and aeration management, compost pile maintenance, monitoring for temperature and decomposition progress, troubleshooting common issues, and proper curing and harvesting of finished compost. The goal is to efficiently recycle food waste into nutrient-rich compost that supports sustainable gardening and reduces landfill burden.

1. Collection and Segregation of Food Waste

1. Designate a labeled bin/container for organic food waste in the kitchen or designated area.
2. **Acceptable:** Fruit and vegetable scraps, coffee grounds, tea leaves, eggshells, bread, grains.
3. **Not Acceptable:** Meat, dairy, oily foods, pet waste, diseased plants, plastics, glass, metals.
4. Empty the bin regularly into your outdoor or designated compost area.

2. Preparation and Layering Techniques

1. **Brown Material (Carbon-rich):** Add dry leaves, shredded newspaper, cardboard, wood chips.
2. **Green Material (Nitrogen-rich):** Add fresh food scraps, grass clippings, coffee grounds.
3. **Layering:**
    - Alternate layers of brown and green materials (about 2:1 ratio of brown to green).
    - Start pile with a coarse brown layer for airflow, add green layer, then cover with brown.

3. Moisture and Aeration Management

1. The pile should be moist as a wrung-out sponge. Add water if dry; add dry browns if too wet.
2. Place pile in a partially shaded area to maintain moisture.
3. Turn or aerate with a pitchfork/shovel every 7â€“14 days to supply oxygen.

4. Compost Pile Maintenance

1. Add new scraps by burying them in the center of the pile and covering with browns.
2. Keep pile at least 1 cubic meter (about 3ft x 3ft x 3ft) for effective heat generation.
3. Continue adding in layers, maintaining moisture and aeration.

5. Monitoring Temperature & Decomposition

1. Monitor temperature with a compost thermometer; ideal: 54Â°â€“65Â°C (130Â°â€“150Â°F).
2. Heat indicates active decomposition; the pile should cool as compost matures.
3. Check for progress: material should break down into dark, crumbly soil-like compost in 2â€“6 months, depending on conditions.

6. Troubleshooting Common Issues

- **Bad odors:** Add dry browns, turn pile for aeration.
- **Dry pile:** Add water and more greens.
- **Pile not heating up:** Add more greens, increase pile size, turn frequently.
- **Pests:** Avoid adding forbidden items, cover fresh scraps with browns.

7. Curing and Harvesting Finished Compost

1. Allow the finished compost to cure for 2â€“4 weeks without new additions.
2. Harvest once compost is dark, crumbly, earthy-smelling, and no recognizable food items remain.
3. Screen compost to remove large or uncomposted material; return these to a new pile.
4. Use finished compost in gardens, pots, or landscaping as organic soil amendment.

Note: *Follow local composting regulations. Regular monitoring and adjusting will optimize the composting process.*