

Gladstone Rose and Donald Excel discussed a unique idea — combining **bamboo charcoal briquettes** with **natural cinnamon aroma** which we believe could appeal to niche markets like BBQ lovers, eco-conscious households, and even indoor air purifiers.

Here's the **best method proposed by QSL** to make *cinnamon-flavored bamboo charcoal briquettes* from start to finish:

Materials Needed

Raw Materials

- **Bamboo** (dry culms or waste)
- **Cinnamon sticks or powder**
- **Binder** (e.g., cassava starch, molasses, or cornstarch)
- **Water**

Equipment

- Drum or kiln for **carbonization**
 - Grinder or hammer mill
 - Mixing basin or drum
 - Briquette mold or hydraulic press
 - Drying rack or solar dryer
 - Protective gloves and mask
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Step-by-Step Process

1. Carbonization of Bamboo

Turn raw bamboo into charcoal.

- Cut bamboo into small pieces.
- Place in a kiln or 200-liter drum with limited oxygen.
- Heat slowly to 400–600°C for 3–4 hours.
- Allow to cool completely before opening.

💡 **Tip:** Use a top-lit updraft method or a TLUD kiln for more efficient carbonization.

2. Grinding

- Crush the cooled charcoal into a fine powder using a hammer mill or grinder.
 - Sift to remove any large chunks.
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3. Prepare Cinnamon Additive

Choose your cinnamon source:

- **Cinnamon powder** (best for uniform mixing)
- **Cinnamon extract/oil** (for a strong aroma)
- **Crushed cinnamon sticks** (less effective but natural)

Mix into the charcoal at this ratio:

✅ **2–5% of total dry weight**

4. Add Binder

Prepare a natural binder to hold the briquette together:

- **Cassava starch** or **cornstarch** solution: boil in water until thick.
- Ratio: **5–10% binder to charcoal by weight**

Mix charcoal + cinnamon + binder into a thick, moldable paste.

5. Molding or Pressing

- Use a **manual mold** (cylindrical or pillow-shaped) or **hydraulic press**.
- Press until firm.

⚠️ Ensure even pressure to prevent crumbling later.

6. Drying




- Dry in the **sun** (2–5 days) or use a **solar dryer** or **oven** (below 100°C).

- Briquettes must be **fully dry** to burn well.
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7. Packaging and Storage

- Store in a **dry, airtight container** or eco-friendly packaging.
 - Label with your brand and cinnamon scent info.
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Bonus Ideas:

-  Market as “Eco-Friendly Flavored Briquettes”
 -  Add **clove or orange peel powder** for festive blends
 -  Consider **activated bamboo charcoal** for air purifiers (infused with cinnamon)
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Potential Uses:

- **BBQ Grilling** with subtle cinnamon aroma
- **Mosquito repellent charcoal** (cinnamon has insect-repelling properties)
- **Home fragrance** (slow burn in clay pots)

This is a QSL document for sharing and further development with the BWP Club 13 June 2025